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JAN. 1, 1898.]

[THE GARDEN.





AN  
ILLUSTRATED WEEKLY JOURNAL

OF

HORTICULTURE IN ALL ITS BRANCHES.

FOUNDED BY

*W. Robinson, Author of the "English Flower Garden."*

"You see, sweet maid, we marry  
A gentler scion to the wildest stock ;  
And make conceive a bark of baser kind  
By bud of nobler race : This is an art  
Which does mend Nature,—change it rather : but  
The art itself is nature."

*Shakespeare.*

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VOL. LII.—CHRISTMAS, 1897.

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LONDON :

OFFICE: 37, SOUTHAMPTON STREET, COVENT GARDEN, W.C.

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TO

# J. GILBERT BAKER

*(of the Herbarium, Royal Gardens, Kew)*

THE FIFTY-SECOND VOLUME OF "THE GARDEN"

Is dedicated,

*W. R., January, 1898.*



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## JOHN GILBERT BAKER.

JOHN GILBERT BAKER was born at Guisborough, in Yorkshire, in 1834, and early in life devoted himself to the study of British wild flowers. In 1866 he was appointed curator of the herbarium of the Royal Gardens, Kew, having, by his publications, previously placed himself in the front rank of the authorities on British plants. His "North Yorkshire," without being a bulky book, is a model of what a local flora should be, and doubtless gained him his position at Kew, where he commenced a career of activity in botanical work which he has maintained up to the present time. Although he has done an immense amount of purely botanical work, he has been a continuous and copious contributor to what may be termed garden botany during the whole period he has been at Kew. Indeed, there is no botanist living to whom gardeners are more indebted than John Gilbert Baker, though he has persistently refrained from the discrimination and nomenclature of varieties, a task he properly left to the florist. His first work at Kew was the completion of the "Synopsis Filicum," designed and commenced by Sir William Hooker, whose sudden death happened when he had written only two or three sheets of the book that has so long been the only one in the English language containing descriptions of all the species of Ferns then known from all parts of the world. A second edition appeared in 1874, and another, containing the numerous novelties discovered since then, would be warmly welcomed now. This is not the place for a bibliography, but of his numerous popular monographs of the cultivated species of genera previously very imperfectly known we may refer to those on Agave, Aquilegia, Amaryllis, Crocus, Helleborus, Iris, Lilium, Narcissus, Pæonia, Rosa, Selaginella, Sempervivum and Yucca. This, however, is merely a tithe of the work accomplished by Mr. Baker. Among his more recent separate publications that specially appeal to the gardener are: "A Handbook of the Fern Allies," "A Hand-book of the Amaryllideæ," and "A Hand-book of the Bromeliaceæ."

But it is not only as a writer that Mr. Baker has furthered the cause of gardeners and gardening. A long generation of medical students, gardeners, and others owe the foundation of their botanical knowledge to his vigorous and sympathetic teaching. A man may be a very good gardener, it is true, without knowing anything of botany, and practical knowledge is of far more importance; yet botanical knowledge, like artistic knowledge, is capable of adding greatly to the enjoyment of gardening, and we have no hesitation in saying that the courses of lectures at Kew, in which Mr. Baker has taken a prominent part, have afforded willing men opportunities which have resulted in mental and material advantages not easily obtained elsewhere.

Among Mr. Baker's writings less known to the gardening world are a "Flora of Mauritius and Seychelles," a "Flora of the English Lake District," "A New Flora of Northumberland and Durham," and "Elementary Lessons in Botanical Geography." In addition to these he has contributed to the "Flora of British India," to the "Flora of Tropical Africa," to the monumental "Flora Brasiliensis," and other publications too numerous to mention. Amidst all this research and investigation Mr. Baker has ungrudgingly, indeed we may say amiably, devoted much time to assisting those less fortunately situated with regard to literature and type specimens, and it is only those engaged in the same or similar vocations who know how often and thoughtlessly this kind of disinterestedness is abused.

On the retirement of Professor D. Oliver in 1890, Mr. Baker was promoted to the post of keeper of the herbarium and library, a branch of the Kew establishment which is little known to the public, and which involves an amount of responsibility that surprises a casual visitor. Honours, as we all know, do not fall thickly on those engaged in scientific pursuits, and it is perhaps as well so. Mr. Baker was elected a Fellow of the Royal Society of London in 1878, and has served on the council of that body. He was also among the sixty selected to receive the Victoria medal distributed by the Royal Horticultural Society.

# The GARDEN.

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## ORCHIDS.

### CATCLEYA GIGAS.

ALTHOUGH the varied forms of this superb Cattleya are given many varietal names, it must be conceded that, taken as a species, it is much less variable than any other of the labiata group. Plants in two or three varieties purchased from different nurserymen are almost, if not quite, identical in the colour and markings of the blossoms, the only perceptible difference being a slight one in the size. There is not a finer species in the genus when properly managed; the immense flowers with the fine showy lip, although not quite so rich in colour as some others, are among the best for a choice display. *C. gigas* is best grown in a good light, as here the growths get well ripened, are less likely to start out of season, and are usually the forerunners of a bountiful bloom. They occur upon the forming growths, the sheath that precedes the bloom showing almost as soon as the leaf begins to open, and about five or six are produced on each spike. The aim of the cultivator should be to get the young growths on the move early in the spring, as with the increased light and temperature in early summer most of these produce spikes; whereas in winter, when light, and to a certain extent heat, have to be withheld, many of them will not do so. But even of more importance than the time of starting is getting the bulbs well ripened by a fairly high temperature when finishing, and abundance of air and light. This class of growth usually goes naturally to rest as the sun loses its power and the heat declines in autumn; the plants keep dormant with little or no trouble through the winter, and come away with a rush into flower just about now. Some may say it is easy enough to give this advice, but not so easy to follow it, and not without reason; but the more this advice is followed the greater will be the success. Then if growths do start out of season—as they sometimes will, the best of care notwithstanding—do not attempt to check

them, but encourage them by the lightest and best position in the house and careful attention to watering. Frequent disturbance at the root is unnecessary and harmful, but the plants cannot thrive in a close compost or one that is waterlogged and sour. If the young pseudo-bulbs commence to root before the flowers form they should be repotted or rebasketed then, but if they can be left until after flowering, so much the better. The roots are large and fleshy, requiring a good open description of compost and a fairly wide root-run. In small pots it is difficult to keep them at home, as they grow out over the rims every season. Where the pots are large, only a very thin compost is needed, except for large specimens, which are, unfortunately, not often seen. Baskets are very suitable for this Cattleya, as they are lighter than pots for suspending, and the freedom with which air and light play about the roots is a great advantage. Which-ever is used, keep the base of the pseudo-bulbs well up, so that they just rest on the surface of the compost, and allow a fair rise to the centre of each plant. Newly-imported plants of *C. gigas* usually arrive in fair condition, and some are so plump and fresh when received as to suggest potting up at once in peat and Moss. As a rule they are better for a few weeks' plumping up in a warm, moist house, placing in their pots before any young roots that may form are likely to be damaged in the operation. These often flower freely upon the first-formed bulbs. *C. gigas* is said to have been collected as far back as 1849 by the Polish collector, Warszewicz, to whom it was dedicated by Reichenbach, but as the above name was given to the species by Linden at a time when more plants of it were brought into cultivation, it is now the better known and generally used.

**Oncidium crispum.**—This is an old and common enough species, but the flowers are as handsome and useful as any just now. The habit is of the well-known kind in the genus, flattened, erect pseudo-bulbs occurring on a creep-

ing rhizome, the spikes appearing at the base of the last formed of these between the leaf and bulb. The number of blossoms depends upon the strength of the plant; they are individually large and showy, a pleasing combination of brown and golden yellow. *O. crispum* is not difficult to grow, yet requires careful culture, a light, almost unshaded position and plenty of water while growing.

**Oncidium Croesus.**—This hardly differs from *O. longipes*, but is rather more highly coloured, while *O. janeiriense* is another very similar kind. *O. Croesus* is now flowering with me, several spikes having as many as six or eight blossoms. The sepals and petals are reddish brown, the lip yellow with a very dark purple, almost black, disc. The flowers though small last well in good condition, are very freely produced, and when as many flowers as noted occur on the spikes the species makes a nice show. It is not a fastidious plant as to temperature, but likes more heat than the *Odontoglossum* house usually affords.—R.

**Cattleya bicolor.**—The stately habit and freedom with which this plant blooms, to say nothing of its distinctness, should ensure it a place in collections, though it must be owned it is not by any means so showy as many of the labiata and other sections now flowering. The spikes occur at the apex of growth just as the pseudo-bulbs are thickening out, and bear upwards of a dozen flowers. These are olive-brown, the centre of the lip crimson-purple, some varieties, as *C. b. Measuresiana*, having a white margin. The side lobes of the lip are small and do not enclose the column, as is usual in the genus. It is a native of Minas Geraes, a province in Brazil, and was introduced in 1837.

**Cattleya Mossiae.**—I have a plant of this species now carrying over thirty of its fine rosy-tinted blooms, each being over 8 inches across and making a fine show. The plant has not been repotted for four seasons, but every year a little of the old material is taken from the surface and replaced by new peat and Moss, taking care that plenty of charcoal or crocks is placed with it to make up for the extra thickness. It is an important point in the culture of *C. Mossiae* that the plants are kept warm and well treated after blooming, as the season is late and

it has to make up its bulbs for next year, in this way differing from *C. Gaskelliana* and other summer-flowering kinds.—R.

**Odontoglossum Lindenii.**—This species is seldom seen in flower, but when it does bloom it attracts a good deal of attention by its distinctness and fine colour. It has large pseudo-bulbs, from which springs a tall, sometimes branching spike of lemon-yellow blossoms. *O. Lindenii* is a native of New Grenada, where it was discovered many years ago, but probably again lost to cultivation, as it does not appear to have flowered in this country until much more recently. It delights in a cool, moist house and plenty of moisture all the year round.

**Cypripedium Lawrenceanum.**—This fine plant is still in bloom, and only last week I noted a fine batch just throwing up, so that the flowering season extends over three months. Not only are the blossoms large and handsome, but the foliage is more finely variegated and showy than in almost any other known kind. It is a variable kind, a handsome form with very large dorsal sepal being known as *C. L. expansum*. It is not an old species by any means, having been discovered in Borneo as recently as 1878, but has already become very popular.—H.

**Miltonia spectabilis striata.**—A pretty form of this variable species I noted in flower this week had sepals and petals of a delicate rosy white, with a suffusion of lilac-purple. The lip was lighter in ground colour, almost pure white in fact, with heavy radiating lines of deep rosy purple. All the forms of this old species are useful and interesting Orchids, lasting a long time in good condition, and when well grown flowering profusely. They thrive best in a light position shaded only from bright sunshine, with a thin surfacing of compost and a liberal supply of water while growing.—R.

**Cattleya Forbesi.**—The blossoms of this species are perhaps not large or showy enough to appeal to present-day growers, yet they have a distinct appearance that is lacking in some more showy kinds. It belongs to the same section as *C. intermedia* and grows about a foot high, producing a four or five-flowered raceme from the apex of the stem. The segments are all of a greenish yellow tint, the lip being marked in front with reddish purple. It is very free blooming, often flowering twice in a year. It is named after its discoverer—Forbes, a collector for the London Horticultural Society, who sent it home in 1823.

#### ONCIDIUM CONCOLOR.

The pretty self-coloured yellow blossoms of this *Oncidium* are among the most ornamental in the genus, notwithstanding it only grows a few inches high. On the strongest plants the bulbs seldom exceed 2 inches in height, yet from these a spike springs over a foot in length densely packed with large flowers. Though not a difficult plant to grow, it is one that when received in good condition every endeavour should be made to keep it so. Once get the pseudo-bulbs badly shrivelled from over-flowering or lack of moisture, and it will not be an easy matter to bring it back to luxuriance, but when well situated and thoroughly healthy, it is the cultivator's own fault if he does not keep it in health and increase its size. Though a native of Brazil, it is found naturally at considerable elevations upon the Organ Mountains; consequently cool and moist conditions all the year round suit it best. One thing that all these cool *Oncidiums* detest is a dry or draughty house. Air they delight in—must have, but the currents or air must be regular and tempered by moisture. Perhaps the best of all positions is one not far from a ventilator in the roof, where the air currents rustle the foliage as if moved by the touch, and in a house that never rises much above 70° in summer or falls below 50° in winter. The roots are of medium strength, but are not ambitious in leaving their pot or basket, preferring rather to coil around the lumps of charcoal and corks that

are mixed with the peat and Moss given as compost. A little only of this is required, from an inch in thickness for the smaller plants, to 1½ inches or so for the larger ones. But let the material be the best at command, as it does not like disturbance. Once in two years is often enough to repot or rebasket, but if the surface seems at all sour in the intervening season, let a little of it be removed and replaced with new. Care is needed in doing this, especially around the new pseudo-bulbs, for if the young roots are damaged or broken much more harm will be done to the plants than the top-dressing does good. After disturbance, keep the roots well on the dry side for a time, but load the atmosphere with moisture. Keep this up all the year round, and when new roots have formed and the plants are again established, water may again be freely applied. Healthy plants are not, as a rule, troubled much by insects, as they grow under conditions ungenial to the latter. Should white scale put in an appearance, lose no time in effecting a clearance of them by carefully sponging the plants time after time until all the insects are destroyed.

**Bollea cœlestis.**—This bright and pretty Orchid I recently noted in good condition. It usually bears single-flowered spikes, these being frequently over a foot in height, each blossom about 3½ inches across. The colour is a pretty light blue on the petals and sepals, shaded with mauve and white, the lip deep purple and violet. It is as good a grower perhaps as any in the genus, and if once established on a large raft or in a basket with a thin, but substantial compost will usually be satisfactory. A broken light is necessary for it, and having no pseudo-bulbs, dry rest must not be attempted. The *Cattleya* house is suitable to its needs as regards temperature, but shade must never be overlooked. *B. cœlestis* is a native of Colombia, and was introduced in 1878.—H.

**Aerides crispum.**—A good variety of this *Aerides* is a really charming Orchid and one worthy of all care. It is a tall grower, producing long branching spikes from the upper portion of the stems, and these last a long time in full beauty. The individual blooms are large and sweetly scented, the sepals and petals nearly pure white, the lip having a deep purple blotch in front that gives the species its distinct character. It requires plenty of heat to do it well, a moist atmosphere and clear light, without being scorched. Baskets or pots of *Sphagnum* and charcoal suit it well, these being very well drained and clear, as a liberal supply of water is needed when growth is active. The roots must be kept within bounds as far as possible to obtain the best results. The appearance of the roots is a good guide as to the amount of water required; when the points are fresh and green it is plain they are in search of moisture, but when they cloud over their resting season is not far off. *A. crispum* is a native of South and West India, and first flowered in England in 1841.

**Læliopsis domingensis.**—This pretty plant is seldom seen under cultivation, and more than once plants have been sold under the name that are simply one of the Mexican species of *Lælia*. Such a case was brought to my notice very recently, when a flower of *L. albidia* was sent as the kind named above. *L. domingensis* grows about 6 inches high, the pseudo-bulbs roundish and rarely exceeding 2 inches in height. The flowers are crowded upon the raceme, about half a dozen being the usual number, and they seldom expand fully, or, according to my experience, last long in good condition. It is, I believe, seldom imported by the trade or through the usual channels, but some years since I had the charge of a nice little batch of it that had been collected privately. These were fastened to small charred blocks at first, and afterwards placed entire into baskets. They were grown with *Dendrobiums* and other heat-loving species in a house little shaded, and were well watered while making their growth, but not syringed much overhead. The pseudo-bulbs complete, they were turned out to ripen with the

*Dendrobies* at first in a warm, sunny house, afterwards in the open air, and they flowered well. The sepals, petals, and lip are of a pretty soft rose, the last having a deeper-tinted blotch in front and a pale brownish-yellow throat.—H. R.

**Cattleya Warneri.**—This pretty species is in flower this week in variety, one of the most attractive forms having small, but very delicately tinted flowers. The crimson blotch on the lip is extremely rich and well defined, showing up the lighter sepals and petals. Each flower measures just over 6 inches across. It is a very near relation of *C. labiata autumnalis*, the lip markings resembling those of this more than any other of the *labiata* section. It pushes into growth early in the season, and the flower-spike appears in the centre and at once comes to perfection, in this way differing from *C. Mossiae* or *C. Mendeli*. I usually leave the plants until after flowering before repotting, as by this means the young roots that are annually emitted from the rhizome at once enter the new compost. But plants differ a little in the time of this root-production, especially those that flower late in the season, and it becomes necessary in such cases to repot about April, otherwise the plants have barely time to re-establish themselves before winter. Temperature and compost as usually recommended for this group are suitable to *C. Warneri*, a plant I always like to keep up to the light as much as possible. If unduly shaded or kept in too high a temperature after blooming, so as to cause it to break again into growth, it will not flower freely.

#### NOTES ON ORCHIDS.

GROWTH is now very active in all Orchids, and the bright sunshine lately experienced is just what was wanted for the deciduous *Dendrobies*, *Calanthes*, *Thunias*, and other occupants of the warmest or East India house. Any of these *Dendrobies* that start away into growth while in flower should be attended to at the roots after the blossoms fade, for if left too long a check is given to the growth owing to the young roots being disturbed. Small plants of *D. crassinode* or any in this class may have a little top-dressing, but it is not, as a rule, so beneficial to them as to deeper-rooting subjects. The growths on *Thunia Marshalliana* are already about 18 inches in length. The plants are standing quite in the full sun where atmospheric moisture and heat are abundant. This rapid growth, of course, makes considerable demands upon the roots, which have nearly filled the pots, and must be kept very moist. *Cypripediums* need hardly less heat, but more shade, and the colour of the young foliage is almost as attractive as that of the blossoms on many species. Plants of *Oncidium Kramerianum* that had all the old bloom-spikes removed last season are just pushing the flower-buds from new spikes formed during the present spring; consequently they make a nice succession to the earlier blooms upon plants that had not this attention. Roots and growths of these are active now, and the Moss about them must be kept moist, and if kept growing, all the better. *O. Jonesianum*, too, is on the move, though the roots are not yet starting from the young growths. A very light position only just screened from the brightest sunshine suits this best. The right temperature of this house may now range from 60° to 65° by night; the latter figure need not be exceeded all through the summer. Let the plants have the advantage of heat and moisture by day, but let the temperature be as restful as possible by night. In the *Cattleya* house there is now a fine display, *C. Mossiae* being a host, besides *C. Mendeli*, a few early plants of *C. gigas*, and one or two of the upright-flowered section. All arrears of potting among *C. Trianae*, *C. Gaskelliana*, *C. Percivaliana*, and others should be brought up, but *C. Mossiae* and *C. Warneri* may now with advantage be left until the blooms are past and the young growths advancing. In *C. Lawrenceana* we have a lovely early summer-flowering *Cattleya* that dislikes much disturbance; consequently if the roots are in fairly

good order they may be left alone, but if repotting is necessary it must be very carefully gone about. Anguloas are strong-growing, gross-feeding Orchids, requiring considerable care. I find that the best time to repot is, in most cases, as soon as the flowers are past, but no time must be lost, or the roots will be too far advanced to allow of its being done without injury. There are many other plants that may be seen to now, including Brassias of sorts, and Oncidiums having long erect spikes, as *O. sphacelatum*, *O. altissimum*, *O. incurvum*, and others. In fact, at this time of year one might almost be tempted to say, "When in doubt, repot," for disturbance of any epiphytal warm house or intermediate Orchids is fraught with less danger now than at any other season, and for reasons which are obvious. The night temperature for the Cattleya house may be kept as near as possible to 55°, running up by day with ordinary sun-heat to about 80°.

The earlier potted Pleiones are growing and rooting freely in the cool house, and when it is seen that the roots are enveloping the compost, see that they are not allowed to suffer from want of water. Even the latest kinds are by now well advanced, and there is but little danger of the roots decaying unless very carelessly watered. Odontoglossums are becoming daily more active, some of the *O. Halli* section being already in full growth and rooting freely from this year's shoots. Such plants take a good deal of water, but care is even yet needed with *O. triumphans* and the late-flowering plants of *O. luteo-purpureum*, *O. Pescatorei*, and others. *Oncidium concolor*, *Sophranitis grandiflora*, *Odontoglossum Cervantesi*, and various other small-growing kinds suspended from the roof must be carefully watched, as from the greater freedom with which the air plays about them they dry up more quickly than plants on the stage. *Sobralia macrantha* is, I should imagine, about the most thirsty subject in the family, plants that have not been potted for a couple of years taking large quantities of water daily. The great fleshy roots seem to delight at this time of year in being surrounded by moisture, and they may easily be seen foraging for it by their green hard tips. It will be more difficult now to keep the temperature of the cool house down, but endeavour as far as possible to keep it below 70° on the hottest days. This will always feel pleasantly cool, and is the best one can do. The night temperature may still stand at about 50°, this allowing of a little air being left on top as well as the usual chink on the lower ventilator. R.

#### DENDROBIUM SUPERBIENS.

In its best form this is one of the finest of the Australian Dendrobies, its long-lasting and free-flowering qualities being remarkable. The flowers occur in fine arching racemes, and are either terminal or lateral on the new pseudo-bulbs, and often the older, hard bulbs push out a few spikes. Each flower is upwards of 2 inches across, rich crimson-purple in the better forms, with a pale or pure white margin to the lip. The strongest plants are over 2 feet in height, and when this vigorous growth can be kept up under cultivation immense spikes are the result. *D. superbiens*, like *D. Phalenopsis* and others of this set, is an erratic plant to grow. Sometimes it does well in collections where apparently little trouble is taken in its culture; at others, no matter how carefully it is done, weak growths and few flowers are the rule. I am convinced that one reason for this unsatisfactory state of affairs is repotting or basketing at the wrong time—i.e., when the plants are at rest. Before I repot I like to see the young shoots several inches in length and taking on that rounded shape at the base that is precursory to root-formation. Then the plants have the advantage of the undisturbed old roots until just as they are sending out these foragers on their own account, and with a little close, warm treatment afterwards hardly any check will be observed. Regarding position and receptacles, I believe there is nothing better than

medium-sized or small pans hanging from the roof in a light and very moist house. The growth may in fact be almost wholly exposed to the sun, and if moisture in abundance is kept about them no injury to foliage or bulbs will accrue. A lot of heat, of course, is thereby generated, and it is just this kind of heat that the plant delights in. When repotting drain the pans thoroughly, placing over the crocks a little rough Sphagnum; firm the material well about the roots, this consisting of peat and Moss, with crocks and charcoal finely broken. Clip off all neatly, or it will be difficult to see whether or not the plants are dry at the roots. While growing freely abundance of water is needed, letting the roots get a little on the dry side occasionally. It is not often that the plants rest entirely during winter, but if they do, keep them dry and fairly warm. The flowers are produced at various times during the year, plants often being in bloom for six months at a time. It is a native of the islands about the Torres Straits and the adjacent mainland, and was introduced by Messrs. Veitch in 1876. H.

**Cypripedium caudatum Wallisi.**—This is a very delicate and pretty variety of *C. caudatum*, quite distinct from the typical plant. The petals are not usually so long as those of the latter, the sepals white, with pale rose and green veins, the lip white, suffused with yellow and spotted with reddish purple. *C. c. Wallisi* is a native of Ecuador, of more recent introduction than the type, having been sent home in 1872. It delights in a very open, well-drained compost, plenty of water all the year round, and the temperature of the Cattleya house is high enough for it. It was recently in good condition at Messrs. Veitch and Sons' nursery.

**Saccolabium ampullaceum.**—This bright and effective little plant is in flower at Mr. Bull's, the bright rosy magenta spikes showing up well against the deep green foliage. The plant is dwarf in habit, very free blooming when healthy, and not difficult to grow. It is a widely distributed plant in the tropical parts of India and Burmah, whence it was introduced to cultivation about the year 1837. It remained rare until nearly thirty years after, when Messrs. Hugh Low and Co. imported a quantity of plants. It thrives well in a warm, moist house, with plenty of light and abundance of water during the growing season. It does best in pans or baskets of limited size.

**Cypripedium Exul.**—This pretty species is still in bloom, but, unfortunately, does not throw so many flowers as one would like to see, though they last long in beauty. Its affinity to *C. insigne* is obvious at a glance, but of course it is quite distinct. The dorsal sepal is yellow below, pure white at the apex, and there is a number of irregular purple blotches principally about the base. The petals are narrow and light brownish yellow, the lip much clearer yellow, with one or two spots about the throat. It is as large as a medium *C. insigne*, and the plant resembles this old species in growth. A warm greenhouse temperature suits it well if given a fairly shady position and moisture in abundance in the atmosphere. The roots are strong and vigorous, delighting when healthy in a free and open, yet substantial, root-run of the class usually recommended for the genus. It is a native of Siam and was introduced to this country in 1892.

**Lycaste aromatica.**—As the specific name implies, this pretty species is sweetly scented, and this added to its bright golden tint of colour makes it welcome, though the flowers are small individually. They occur in single-flowered scapes, which are produced in abundance from the base of the last formed pseudo-bulb, and last well in good condition. Sepals, petals, and lip are all golden yellow, the last of singular form, almost cylindrical. It is of the easiest culture, and may be established with hardly any trouble. I have frequently potted up the plants just as received in light loam, peat, and Sphagnum Moss,

and by the end of the second season it is difficult to see that they are not old-established specimens. It is one of the easiest to propagate by division, and may be pulled into almost as many pieces as there are pseudo-bulbs, and each one will eventually make a plant. Each leaf is certain to grow, and these small bits have a very quaint appearance when in flower, a plant consisting of a couple of bulbs only producing perhaps a score of flowers. It does well in any cool, moist structure during summer, commences to grow soon after the flowers begin to push at the base, and may be wintered in a house kept above 45°. It is a native of Mexico, and a very old inhabitant of our Orchid houses. H.

**Aerides Houlletianum.**—The flowers of this species are extremely pretty, and it is a pity it does not attain a larger size under cultivation. That it is rather difficult to grow must be conceded, as, although in some cases it goes on and flowers year after year, it is seldom seen showing much vigour after it has been cultivated a few seasons. The habit is not unlike that of a broad-leaved form of *A. odoratum*, but the blossoms are quite distinct. These are large and more expanded than usual, the sepals and petals being greenish when first open, but changing to a beautiful nankeen-yellow. They are tipped with rosy magenta, and the fimbriated lip is similar in colour. Small plants should be grown in suspended pans or baskets not far from the roof glass in a warm, moist house. During the time growth is most active plenty of water must be given, but when at rest considerably less suffices. The compost may consist principally of Sphagnum and charcoal. *A. Houlletianum* is sometimes classed as a variety of *A. falcatum*. It is a native of Cochin China, and has been known since 1868, when it flowered with a French Orchid grower, and was named by Reichenbach after M. Houllet, of the Jardin des Plantes. It was not introduced to England until several years later, and has never become a common plant.

## KITCHEN GARDEN.

### SAVING VEGETABLE SEEDS.

SAVING seed of choice vegetables is a matter requiring great care, as the best strains are easily spoiled by cross fertilisation. It is, of course, useless trying to seed two things of the same family in the same garden, although this is sometimes attempted. Some time ago I knew of a case of spoliation that occurred in the eastern counties. A nurseryman possessed a very superior Cabbage and had seeded it successfully for several years. At length, however, a large plot was set apart for seed, the owner being ignorant that a few fields away another plot of one of the Brassicas was being seeded by another party. The result was that cross-fertilisation was effected by insects, and the grand stock of Cabbage which had been saved by a gardener for many years previous to its passing into the hands of the seedsman was completely spoiled. Anyone possessing an extra good strain of any vegetable will do well to save seed, if only a very small patch, himself, as nurserymen cannot afford to what is termed "rogue" the plants that do not correspond exactly with the type too rigidly. A gardener of my acquaintance who possesses some remarkably fine strains of vegetables always made a rule of getting several of the lodge-keepers living at the outskirts of the large deer park to set apart a small plot in their garden for, say, Cabbage, Cauliflower or Broccoli, paying them for their trouble by a supply of plants of the various sorts of winter greens. The same gardener possessed a fine strain of Brussels Sprouts, and each season, previous to commencing picking, the plot was

gone through, and a certain number of the most perfect marked by having a stake thrust into the ground. These were in due time transplanted into a spare plot and saved for seed. Beet, where lifted in autumn, was sorted over, and a few dozen of the medium-sized, best-shaped roots selected, these being clamped separately and planted out in March. The seed sower is often at much trouble to keep at bay the feathered tribe, as the finches are partial to all the Brassica tribe, also to Beet, Turnip and Endive. The gun, of course, makes them shy, but covering with fish netting is the only sure way of saving the seed. The seasons also have much to do with the good or bad quality of vegetable seeds, so that, altogether, seed saving, although a pleasant, is by no means a certain undertaking. C. C. H.

**Late Broccoli.**—Several notes have appeared in THE GARDEN recommending Late Queen as the best late Broccoli grown, but I cannot recommend it as being the best late, as it generally turns in about the end of April or early in May. Champion is one of the best Broccoli to cut in June. A good companion for it will be found in Universal, which I consider to be far in advance of Late Queen as a good late Broccoli. It has withstood 28° of frost, all the Late Queen being killed. Out of ten varieties grown three years ago only two survived, namely, Champion and Universal.—T. COCKERILL, *Gatehouse Gardens, Wirksworth.*

**Asparagus after cutting.**—I quite agree with all Mr. Parker says (p. 429), especially as to its not being good to use much salt in beds where the soil is heavy. I have a piece of heavy soil under my charge, and some six years ago a portion was sown with Asparagus, with a view to get roots for forcing. When the plants were two years old I applied a dressing of salt during the growing season. This had a bad effect, and these plants have never grown so strongly as some adjoining that had no salt applied to them. In the kitchen garden I can use salt advantageously in small quantities. I apply one or more dressings of guano during the growing season in stormy weather. I have adopted the method recommended by Mr. Parker, namely, staking the growth with Pea stakes for many years with the best results.—J. CROOK.

**Pea Springtide.**—At p. 447 Mr. Tallack praises this new early Pea, and I fully agree with his remarks. I sowed it at the end of February, and the Peas were ready for gathering the third week in June, which I consider quick work in this district after an unfavourable spring. It came in exactly at the same time as Chelsea Gem that was sown in small pots at Christmas and transplanted in March. Given good soil and liberal treatment, I am sure Springtide will please all who need extra early Peas. Sown at the beginning of February in south gardens, this Pea would be ready for use by the end of May. Like Mr. Tallack, I have not a very high opinion of Exonian; at least it did badly on my light soil, and after one year's trial I discarded it. I consider William I. a much better Pea both in regard to cropping and colour.—J. C., *Notts.*

**Pea Gradus.**—Has "A. D." got the true Gradus? as he writes at page 433, "it is tender, long-jointed, and has curled foliage." The last may be seen in the true stock, but not to a great extent and not at all to its disparagement. I have no knowledge of its behaviour, given field culture; but as an early garden Pea I place much value upon it. I am also quite sure "A. D." will not class it with such kinds as Stratagem and others of similar character, as these later kinds, I admit, are superior in habit, stouter and stronger, but later. I note "A. D." does not give us any information as to the newer Excelsior, an excellent early Marrow Pea, and earlier this season than Gradus, and dwarfier. Of course, with so short a haul it cannot be expected to bear so heavy a crop, but with me it is bearing quite close to the soil. I

fear Gradus is given a bad name, and deservedly so in many places on account of the plants being far from true. I have had three distinct types, and, as "A. D." well knows, it is an easy matter for Peas to get much mixed if not well attended to. The true stock I had of Gradus was not tender, but I fear this good Pea will not keep true.—G. W.

**Smythe's hybrid Beans.**—I refer to these dropping the prefix "French," for the use of which in relation to the dwarf section of Kidney Beans there seems to be no warrant. The term "dwarf Beans" conveys all needful information. The hybrids referred to are the product of crossing the dwarf Ne Plus Ultra with the climbing Scarlet Bean, and the result so far has not been at all satisfactory. Many seedlings are but reproductions of the dwarf parent with shorter pods. Many others are dwarfs with scarlet flowers, the pods being of an intermediate form of the dwarf type, yet rougher in flesh. No one feature has been fixed. Generally the seeds are reddish, and of the ordinary dwarf size. The great defect of the strain—which is undoubtedly of genuine hybrid character—is that no best form has been fixed. When at Basing Park last autumn I saw considerable breadths of the strain growing and fruiting. I selected one plant having scarlet flowers, carried in long racemes, yet of dwarf bushy habit, as the best. This was a great cropper, the pods long, green, handsome, and of fleshy texture. That was the best of all, and I strongly advised Mr. Smythe to make that one plant the starting point of the strain, hard roguing everything else that was not true to character. Of course, in putting a mixed hybrid strain into the market it was open to anyone who grew plants to make a selection of the same nature for himself. Naturally hybrid products take a good deal of fixing, and, even with the greatest care in selecting, several years may elapse ere that fixing is complete.—A. D.

**Onions.**—These from spring sowings are so good that there should be unusually fine crops of bulbs in the autumn. Something, whether previous season's drought or the exceeding abundant rains of the past winter, seems to have settled the maggot entirely, for I have not heard one single complaint even where two years since breadths were almost decimated. The same may indeed be said of Carrots. Recent heavy rains generally all over the kingdom have not only given to the soil that firmness which Onions so much like, but the moisture has accelerated growth unusually well. In too many directions sowing has been, as is so customary, too thick, and proper thinning left too long. It is, however, a very good plan to leave one or two rows rather thick to furnish, if wanted, small pickling bulbs; a few rows may be left half-thinned, and the rest properly thinned to ensure the production of plenty of large bulbs for ordinary use. The season should produce some wonderfully fine bulbs from plants sown under glass in mid-winter and planted out thinly in April, as growth is, with them, so rapid. There may be some danger, if artificial manure dressings are too liberally given, that stem growth may be too great and soft and ungainly bulbs produced. Keeping, in Onions, is so much a product of complete ripening that it is better to check undue growth rather than encourage it. Where the rains have been general, as in the London district for instance, Onions, now so deeply rooted, should do well without additional moisture for several weeks. Autumn-sown Onions should have the stems pinched or tied tightly round, so as to check leaf growth and promote bulb formation.—A. D.

**Early Peas.**—Peas are a fortnight later this year than they have been for the last four years. I sowed the following varieties on February 23: Lightning, Springtide, Blue Express, Chelsea Gem, Wm. Hurst, and William I. on a south border. Lightning was the first ready; three days later came Springtide and Blue Express; Chelsea Gem and Wm. Hurst will be a good ten days later; William I. is only just showing flower. I have tried most of the early Peas that have been recommended in THE GARDEN, but

Lightning has been the first ready for use during the last four years.—THOS. COCKERILL, *Gatehouse Gardens, Wirksworth.*

#### POTATO SHARPE'S VICTOR.

I CAN quite understand Mr. Crawford (p. 433) failing to get as good a return from Sharpe's Victor as he would like, as I have this season failed in the same manner and have been considering whether it is advisable to grow this kind so largely if it fails to crop as it has done this year. I think the difficulty is that we have not got the true stock of Victor which was sent out and the spurious kind often grown as Sharpe's Victor is totally distinct from the original. The stock may have become inferior, and in gardening phraseology worked out. Some kinds do this much sooner than others, and it may be so here. I am sure the stock I have at the present moment is so inferior that unless I can get it true it will be given up. For some years I saved my own seed, needing a lot for forcing, and all went well, as I had the true kind. Last season I was obliged to purchase, my own seed having been grown so long that I was under the impression it had deteriorated. Last year the crop was not good. Has Victor deteriorated, as the new seed is much inferior to the stock I discarded? Some readers of THE GARDEN may possibly be able to help us in this matter. The culture may be at fault. My soil, like Mr. Crawford's, is very light. How does it behave on heavier soil? I feed freely and the same culture has not produced such results with older varieties. For instance, I have had a stock of Alma, one of Victor's parents, for nearly twenty years, and it crops freely, but the tubers are small. This I have retained on account of its dwarf top. I got my last seed of Victor from a good source. There was no question as to price, and I am disappointed and feel it is only right to give these particulars to confirm Mr. Crawford's note. I much regret having to do so, as for years I have stood by Sharpe's Victor. With regard to Ringleader, I agree with all Mr. Crawford says in its favour. It improves as it is more largely grown, and next year it will have more space allotted to it. I have several early kinds on trial in the open. A I promises well, but Ninetyfold will, I think, be the heaviest cropper. I hope to send a note on a few of the earliest, and will then describe the best as regards crop as well as earliness. The weather up to a fortnight ago was most unfavourable for early Potatoes, but I notice Ringleader is, so far, ahead of the Ashleaves.—S. H.

— I am sorry to hear Mr. Crawford (p. 433) giving such a poor account of this old favourite. I force it in pots, and it has always done well. Outside it does very well. I have grown Ringleader two seasons, and am giving it another trial, but if no better than the last two years I shall discard it. The soil is very light, in some parts only 18 inches from the rock. I never manure for Potatoes.—T. COCKERILL, *Gatehouse Gardens, Wirksworth.*

#### SHORT NOTES.—KITCHEN.

**Pea Chelsea Gem.**—This valuable early dwarf Pea was ready for gathering with me on the last of May. The seed was sown at the end of January at the foot of a south wall on the top of the roots of Apricot trees. I have adopted this method now for six years with every success. The small round kinds do not find favour here.—J. CROOK, *Forde Abbey, Chard.*

**Sutton's Late Queen Broccoli.** It is a very important question to gardeners without the accommodation for raising early vegetables what to fill in the gap with before early Cauliflowers are ready. I see notes in THE GARDEN at various times respecting late Broccoli, but no mention of this variety, which has never failed me here in June and onwards for, I should say, twenty years. I sow about the middle of May and plant on solid ground, using no manure at the time of planting. It is a dwarf variety.—GEORGE BOLAS, *Hopton Gardens, Wirksworth.*

TREES AND SHRUBS.

THE JUDAS TREE.

(*CERCIS SILIQUASTRUM*.)

WHEN the leafless branches of the Judas tree are studded in May with a profusion of rosy coloured blooms, a good specimen, as in the illustration we give to-day, is a very beautiful object, and quite distinct from all other trees and shrubs that are then in bloom. Before the flowers fade the leaves begin to appear, the distinct shape and peculiar hue of these rendering

sauginea—to which, under the name of *E. langleyensis*, an award of merit was recently given by the Royal Horticultural Society—promises to be a valuable flowering shrub, while it should also serve to direct attention to the desirable qualities possessed by *E. Phillipiana* itself. This last, which is a native of Valdivia, had for a long time the reputation of being tender, but the last few years have proved its thorough hardiness, at least in most parts of England. It is totally unlike the other species of *Escallonia* that we have in our gardens, the leaves being very small, while the same may be said of the individual blooms. They are, however, borne in such profusion that the

among stones. It is a conifer that will thrive where most others fail, and its habit imparts that softened effect which we appreciate for toning down the harshness of an artificial rock garden. In winter its sombre green adds life and variety, besides being a capital foil for spring or winter flowering bulbs. In early summer the new growths further enhance the effectiveness of this true creeper by its pale blue-green tips. When we have quite focussed our studies of our good old things with a view to the best ways of employing them, this shrub, for its neatness, beauty and steady growth, will surely commend itself for extensive use.—J. W.



The Judas Tree at Mortimer, Berks. From a photograph by Miss Willmott, Warley.

the tree a notable object. Later in the season the large, flat seed-pods are very conspicuous, for the foliage at no time is very dense. The Judas tree is well suited for planting as a single specimen on a lawn, an old tree of it being generally a picturesque object. In common with many Leguminosae, the Judas tree will thrive fairly well in a dry spot. In such a position there is a fine old tree at Gunnersbury House which when in bloom is very picturesque. A good account of the Judas tree and its allies will be found in THE GARDEN of May 22 (p. 375) of the present year.

**Escallonia Phillipiana.**—The hybrid *Escallonia* raised between this species and *E. macrantha*

long, arching shoots are completely wreathed with them. This *Escallonia* is seen to advantage when forming a mass or clump on the grass, as the slender shoots dispose themselves in a very graceful manner, the lowermost ones sweeping the turf, while strong examples will reach a height of 6 feet or so, which under favourable conditions will probably be exceeded. The value of this *Escallonia* is enhanced by the fact that its masses of white blossoms are not produced till the majority of our flowering shrubs are over; that is to say, about midsummer or later. It is now met with in the various tree and shrub nurseries, but although moderate in price, it is rarely planted.

—T.  
**Juniperus prostrata.**—Beyond all doubt this is one of the best shrubs we have for planting

EMBOTHRIUM COCCINEUM

THE propagation of this gorgeous-flowered South American Protead is referred to on page 458, where it is said to be a difficult subject to strike from cuttings. This is quite correct unless special means are resorted to. I have often tried to strike the cuttings taken from large plants in the open ground, but in this way met with little success. Being, however, particularly anxious to strike a number of cuttings, and having a couple of plants 4 feet or 5 feet high in pots, I resolved to try the experiment of what is technically called drawing out the cuttings, that is to say, the plants were kept warmer and closer than they had hitherto been, with the result that the shoots produced under such conditions were much more attenuated than if they had grown out of doors or in a cool greenhouse temperature. When partially ripened, that is, just as these shoots had lost their extreme succulent character and become slightly firm, they were taken off at a length of about 4 inches, the cut being cleanly made just below a joint, and the bottom leaf or leaves having been removed, they were dibbled firmly into pots of very sandy peat. Pots 4 inches in diameter are particularly suitable for the purpose, as four or five cuttings can be inserted around the edge of the pot, in which position they strike root more readily than if they are put in the centre. In preparing the pots for the *Embothrium* cuttings, they should be well drained to about one-third of their depth with broken crocks. From their liability to flag, no time should be lost in inserting the cuttings after they are separated from the parent plant. The cuttings that I was so successful with were placed in a close propagating case in an intermediate house temperature, and subjected to exactly the same treatment as those of Javanese *Rhododendrons*, with which they were associated. In this way nearly every cutting rooted, when they were hardened off and potted singly into small pots, using principally sandy peat with a dash of good yellow loam. This process of drawing out cuttings in the manner detailed above may be advantageously employed in the case of many plants which are difficult to root. Where only large specimens in the open ground exist, layering is, as stated on page 458, the best means of increase. The entire order to which this *Embothrium* belongs (*Proteaceae*) is, with few exceptions, a difficult class to strike root from cuttings. Some of the *Grevilleas* are not particularly difficult, while I have also struck various kinds of *Hakea*, *Lomatia*, and *Protea*, but these cannot be depended upon, and all attempts with *Banksias* and *Dryandras* ended in failure. H. P.

**Ostrowskia magnifica alba.**—Hitherto I had seen this plant only in its ordinary colour—rather

a dull lilac—and, in common with many others, I considered it much over-rated. This year I have in my garden one which is pure white, of great beauty, and as much superior to the lilac as is the white *Abutilon vitifolium* to that of the ordinary colour; nevertheless, both these are well worthy of a place, whether in the open or near a wall. A white variety of another plant—*Geranium sanguineum*—has been rather recently introduced by Mr. Amos Perry, and it is most valuable as a companion to the brilliant crimson plant with which we all are so familiar. Where this has been found—whether in England or abroad I do not know—but on the sand-dunes or “links,” as they are called on the Northumberland coast, where the type is very abundant, I have sought for it over hundreds of acres, and sought in vain.—T. H. ARCHER-HIND, *South Devon*.

### A BEAUTIFUL ROCK GARDEN.

IN my notes on “April in South Devon” (p. 367, vol. xlix.) I alluded, shortly, to the charming rock garden of Mr. G. Soltan-Symons at Chaddlewood, near Plympton. This year, on June 1, I had a second opportunity of inspecting it. The garden, which is situated in a sheltered position at the foot of a steep slope, is particularly interesting from the fact that it is the expression of one mind—the owner’s. Every stone was placed in position, if not by himself, under his personal supervision; every denizen of the garden was planted by his own hands, while every weed or subject intentionally exterminated owed its destruction to the same nemesis.

The rockwork is throughout natural in appearance, some of the masses that hold a conspicuous position being of exceptionally fine form, while it affords sites to suit the tastes of the most fastidious rock plants, perpendicular crannies and level soil-patches, shady nooks, and full exposure to the sunlight. Since the formation of the garden many changes and improvements have been thought out and carried into effect, and a further addition is contemplated in the near future which should still further increase its attractions. Beautiful as a whole when viewed from some distance, a closer inspection reveals many exquisite vignettes of flower, Fern and rock; some—complete pictures—but a foot or so in size, but none the less delightful on that account. It may be at once premised that the rock garden of which I write, though containing a large amount of alpine plants, is not an exclusively alpine garden, subjects that commend themselves for beauty of form or colour being utilised as discretion suggests, independently of the section to which they belong.

Thus at the time of my visit *Phacelia campanulata* made breaks of vivid blue; flame-coloured Azaleas on the higher levels were just out of flower, while here and there Japanese Maples spread their deeply-cut bronzed foliage from coigns of vantage. Of alpine plants, the Edelweiss (*Gnaphalium leontopodium*) was in fine bloom. An excellent engraving, from a photograph by Mr. Soltan-Symons, appeared on p. 225, vol. xlii., over the title “The Edelweiss in a Devonshire garden,” and shows to what perfection the culture of this beautiful alpine is here brought. *Achillea rupestris* and *tomentosa* were both in bloom, as was the golden *Alyssum saxatile*. Four *Androsaces* were blooming, a splendid mass of *A. lanuginosa* covering a height of many feet of rough rockwork with its matted foliage and softly-tinted flowers, the other varieties being the white *A. lanuginosa* Leichtlini, *A. foliosa*, and *A. sarmentosa*. *Ethionema coridifolium* was bright with its rosy purple flowers, and the blue stars of *Aster*

*alpinus* stood out well against the grey rock, whilst alpine *Phloxes*, *Armerias* in variety, the white *Arenaria montana*, alpine Wallflowers (*Cheiranthus alpinus*) and *Aubrietias* were all in bloom, as was *Andromeda Catesbaei*. Candy-tuft Little Gem quite deserved its appellation, and dwarf *Campanulas* were in profuse bloom, while of the Rock Roses, *Cistus florentinus*, *C. formosus* and a pink variety were in flower, but *Cypripedium Calceolus* had gone out of bloom. Amongst the Pinks, *Dianthus alpinus*, *D. sylvestris*, and the well-known brilliant crimson Napoleon III. were noticeable, while the yellow-flowered *Draba bruniæfolia*, purple *Edraianthus* (*Wahlenbergia*) *serpyllifolius*, and the rose-coloured *Epilobium obovatum* were adding each their varied tint to the display, and the Mexican Daisy (*Erigeron mucronatus*) was thus early in the season a mass of flower. *Gentiana verna* was still in bloom, and the white *Erodium Reichardi*, from the Balearic Isles, seemed quite at home. In the bright morning sunlight the *Helianthemums*, white, yellow and red, held wide-spread the petals of every blossom. *Fabiana imbricata* was a pyramid of Heath-like bloom, and the dull red *Geum minimum* showed its flowers. Of *Genistas*, the handsome golden and chestnut *G. Andraena*, a white Broom, and *G. sagittalis* were in bloom, and the scarlet flower-spikes of *Heuchera sanguinea* showed prominently. The cool lavender-white *Iberis gibraltarica* and two of the *Lychnis* family, *L. Lagascea* and *L. viscaria splendens*, were in flower, while a plant of *Lotus peliorrhynchus*, a native of Tenerife, was producing its orange-scarlet blossoms freely from a rock-pocket. The Sand Myrtle (*Leiophyllum* (*Ledum*) *buxifolium*), with its white blooms, and the dark blue *Lithospermum prostratum* were both flowering well, while the Welsh Poppy (*Meconopsis cambrica*) is here, as in many places in Devonshire, a veritable weed. Curiously enough, seed collected and sown during the spring in pans often fails to germinate, but self-sown seedlings spring up everywhere among the rocks, in the paths, and in the neighbouring beds. Its tall drooping flower-heads of bright gold and its deeply-cut foliage make it one of the most attractive of the Poppies where it is kept under due restraint. Another yellow flower in bloom was the Sardinian *Morisia hypogaea*, while *Onosma tauricum* provided a lighter tint of the same colour. One of the most beautiful blues imaginable was that of the Rock Forget-me-not (*Myosotis rupicola*), and the Evening Primroses were represented by two varieties in bloom, *Oenothera cardiophylla* and *O. pumila*. The lovely *O. marginata* grows very strongly here, but had not commenced to bloom at the time of my visit. Two gems of the rock garden were *Oxalis alba* and *O. rosea*, with lowly flowers clustering closely to the trefoiled leaves. The violet *Phyteuma orbiculare* and the crimson *Polygonum sphaerostachyum* were both in flower, and the Rose des Alpes (*Rhododendron ferrugineum*) was studied with its crimson-pink blooms, while one of the prettiest sights of the rock garden was provided by a colony of the delicately tinted *Ranonda pyrenaica* blossoming delightfully under the shadow of a perpendicular rock. Of *Saxifrages* twenty-four varieties are grown, amongst which the handsome *Cotyledon*, with its long curving spikes of bloom, was in splendid flower, as were *S. cochlearis*, *S. sarmentosa*, *S. umbrosa*, and *S. Wallacei*, which last is strikingly handsome. In the grass under some deciduous trees the double Meadow Saxifrage (*S. granulata* fl.-pl.) must have been a beautiful sight a few weeks earlier, the sparse remaining bloom-spikes giving an idea of the picture presented, when from the

short green grass beneath the springtide canopy of the Elms the white flowers clustered thickly around the dark boles. *Sedum spatulatum*, *Sisyrinchium bermudianum*, and *Veronica prostrata* were blooming, as well as a small white *Veronica*, while the white Thyme made bevelled mats of flower and foliage between the rocks.

Many rare Ferns grow in this rock garden, the beautiful Oak Fern (*Polypodium Dryopteris*) seeding itself everywhere, while fine masses of *Adiantum pedatum* grow here and there. *Oncoclea sensibilis* also does well. In the ground surrounding the rock garden were some splendid specimens of *Abutilon vitifolium*, many feet in height, and covered with large lavender-white flowers which were very effective. Of *Acers* there were many varieties both amongst and around the rocks, perhaps the most striking being *A. polymorphum dissectum* and *A. p. palmatum*. Large bushes of *Diplopappus* and *Choisya ternata* grew among the *Rhododendrons* and Azaleas that crowned the slope, while slender Bamboos, Yuccas, and Palms, two specimens of *Chamaerops* showing flower, gave their grace of form and delicacy of outline to the picture. Hard by a *Benthamia fragifera* was in flower, and a plant of the lovely Californian Poppy (*Romneya Coulteri*) was looking well for summer bloom; a layer that had been taken off and planted near looked every whit as healthy as the parent, and evidently had not resented root-disturbance after the disastrous manner so common with this subject.

*Tropaeolum speciosum* seems thoroughly established at Chaddlewood, and is growing strongly amidst other climbers on wall and arbour. It has also been planted near some Yews so that it may wreath its scarlet trails through the glossy darkness of the evergreen. Of the fine herbaceous garden, with its Rose arches and its rare and beautiful occupants, I have now no space to speak. Possibly later in the year I may be privileged to refresh my memory by a further introduction to its occupants. S. W. F.

## GARDEN FLORA.

### PLATE 1125.

ADONIS.

(WITH A COLOURED PLATE OF *A. AMURENSIS*.)

IN those gardens where the vernal Adonis is a success it would be difficult to name any plant capable of yielding so great a profusion of blossoms. Generally speaking, the species resent close proximity to large smoky towns, and likewise to being planted in a cold, stiff clay soil. In a pure country air and a soil that is light, deep, and well drained, these plants succeed admirably. Where this is the case it is surprising what may be accomplished by exercising a little extra care with them at planting time. The most plentiful kind is *A. vernalis*, and of this alone large importations are received each year by the hardy plant specialists and offered at a cheap rate. The most unfortunate thing in connection with this plant is that these collected plants are so ruthlessly torn up prior to being sent to this country, that only the stumps of their roots, often not more than 2 inches in length, remain. Needless to say that such mutilated fragments rarely survive when planted. It is possible, however, even with such poor plants at the start to obtain a fair measure of success where a little care is given as soon as

\* Drawn for THE GARDEN by H. G. Moon in the Royal Gardens, Kew. Lithographed and printed by J. L. Goffart.



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the plants are received. Coming to hand in the autumn of each year, these collected plants are distributed during the ensuing months, and when planted at once in heavy soils the old root stumps that are attached quickly decay, and the plants are lost. A large number of these, however, could be saved provided the plants were simply laid in a box of cocoa-nut fibre without soil of any kind. Give a good watering and place them in the open on a bed of ashes. So long as the plants are made rather firm and kept moist, no other attention will be needed till the spring ensuing, by which time it will be found that large numbers of fibrous roots will have issued from the old stumps sufficiently to warrant their being at once planted. Where the soil is cold and stiff it must be lightened by grit and leaf-soil if the *Adonis* is to be grown with success. In very light soils, particularly such as quickly become dust-dry in summer, I have employed large quantities of well-decayed cow manure with much success. In the district of Hampton I have been singularly successful with this *Adonis*, and in a couple of years, by the simple means quoted above, have raised the finest examples I have ever seen from the quite small scraps of imported plants. After two years' growth in the heavily-manured soil here a group of plants about 20 feet long by 5½ feet wide attained to fully 18 inches high, flowering in the greatest profusion and bearing quantities of glistening golden blossoms, each nearly 5 inches across. Grown in this way this *Adonis* is one of the finest of our hardy alpine in early spring, growing and flowering and seeding with the greatest possible freedom. It will, moreover, send its roots down fully 2 feet where the soil is good and permits, and for this reason it should not be planted in the rock garden where but a very thin bed of soil exists. Too frequently, however, because this or that plant is an alpine, a mistaken notion of its requirements appears to gain ground, and many plants are set out where the soil is of the scantiest description. And though this may be true of these very plants in their native habitats, it may be equally true that their roots descend where drought is unknown. Under these circumstances a merely superficial knowledge of the surroundings of many good alpine may not unfrequently tend to mislead. On the other hand, a close scrutiny of the natural habits, combined with past knowledge and experience in our lowland gardens, should greatly assist the grower of hardy plants. All the species of *Adonis* may be raised from seed, and where good plants exist these produce flowers and seeds quite freely. The plants may also be increased by division, preferably late in summer, as soon as the seeds are ripe and gathered. Care will be needed in this, and only the point of a knife should be inserted in the woody portion of the rootstock, and having made an incision, gently wrench the stool asunder. Both seeds and collected plants of *A. vernalis* and *A. pyrenaica* are so cheap, that I would hesitate before cutting up any large clumps, as these are by no means plentiful, preferring to obtain some collected plants in the autumn if established home-grown clumps were not obtainable. Of the perennial kinds—

*ADONIS VERNALIS* is the best. Well grown, its handsome golden blossoms, that appear in March and April in the open, are often each 4 inches or 5 inches across, the plants reaching 1½ feet high. It is perhaps unfortunate that so good a plant when exhibited in spring is rarely more than 4 inches or 6 inches high, and the blossoms, small in proportion, usually fail to give a good idea of its beauty or worth. It is a very old plant, having been grown for more than a couple of centuries.

A variety of *A. vernalis*, viz., *A. v. sibirica*, differs only in its larger flowers, the handsome tufts of finely-cut leaves being much the same as in the type.

*A. PYRENAICA* is a closely allied plant from the Eastern Pyrenees, flowering somewhat later and with rather smaller yellow blossoms and more obtuse petals than in the European kind. It is in all respects a first-class border or rock plant, and where at least a foot deep of good rich light soil can be given, it will soon become established.

*A. VOLGENSIS* is a distinct species from Russia, with leaf characters intermediate between *vernalis* and *pyrenaica*, while the flowers are distinct from those of both in that the sepals of this species are pubescent externally instead of smooth, as in the better-known kinds. The flowers are yellow, each nearly 3 inches across, and appear in April or May. The earliest of all to flower is

*A. AMURENSIS*, the beautiful kind in the accompanying plate. For the past two seasons this species has flowered well at Kew in the rock garden and in the open beds. It was in its best form in the former position, as though approving of a certain amount of shelter so early in the year. This year its blossoms began to open in the first week of February, and though somewhat later the plants were laid level with the earth by snow and frost, they received no injury therefrom. Such an addition to early hardy flowers will be most welcome, and even when the flowers are past there is a considerable lasting beauty in the Davallia-like, finely-cut leaves, the latter quite distinct from those of the other species named. So far as the general character of the flowers is concerned, the plate will speak for itself; while in size they are 3 inches or so across when fully open. Judging by the plants at Kew, the progress of which I have watched with interest, this beautiful plant is of quite easy culture, and in all probability will prove as vigorous and free both in growth and flower as the Vernal *Adonis*, only flowering some weeks before this species. *A. amurensis* is a native of Manchuria, in Northern China, and coming into bloom in this country with the early species of *Crocus*, the Snowdrop, and the Snow Glory should render it conspicuous among choice early flowers in the future.

There are some annual species, though these are much inferior to the perennial sorts. Of the former, *A. aestivalis* and *A. autumnalis* are best known, both kinds having deeply coloured flowers. E. J.

## BOOKS.

### FARM AND GARDEN INSECTS.\*

THERE have been several books published lately on insects which are injurious to our crops; the latest is by Mr. W. Somerville on "Farm and Garden Insects." It is a small duodecimo volume of only 127 pages. Its *raison d'être* is not very obvious, as it does not contain anything new or which cannot be found in other works. It certainly is much smaller than the others, but then it does not include the numerous insects which attack fruit and forest trees. There are, however, many to whom this little book will be useful, notwithstanding the following adverse criticisms, as it contains in a condensed form a large amount of valuable information. It is illustrated with forty-six woodcuts, or, to be strictly correct, with forty-five, and one process block. These are mostly very poor and coarse, that of the Cabbage moth on p. 83 being quite unrecognisable. The frequent use of scientific terms in a book of this description is a great mistake, particularly when, as in this case, there is no glossary. On one page taken at random, the expressions "geniculate clubbed antennæ" "with a six-jointed funiculus," and the term "imagines" are used. What can an ordinary gardener or farmer be expected to understand from the above quotations? Again, such terms as "pergamen-

\* "Farm and Garden Insects." By William Somerville. Macmillan and Co., Limited.

tous," "dorsal surface of the meso-thorax," "caudal appendages," "parthenogenetically and viviparously" are out of a place in a book of this description. The first eighteen pages are devoted to descriptions of the anatomy of insects, their transformations, methods of reproduction, classification, &c. It is not correct, however, when speaking of the grubs of flies to say that they are "generally headless and footless." Many, but not all, have not well-defined heads, but the heads are there; nor do "certain clear-winged moths so closely resemble hornets or wasps as almost to defy recognition." The resemblance is very considerable, but no one with any knowledge of insects could mistake one for the other. In speaking of the Crustacea, the author is evidently under the impression that there is only one kind of wood louse. This is quite wrong, as there are several, and instead of "their being practically of no economic importance," they are most injurious and troublesome pests in gardens. Again, in the appendix when speaking of the *Julidæ*, or snake millipedes, the author says, "Instances of material damage having been done to plants by millipedes are very rare." This is most ridiculous, as the amount of damage which they do the roots of many plants is enormous, and they often attack ripe Strawberries. Among the "preventive and remedial measures" in the case of wireworms, powdered rape-cake is said to be distasteful to them. This is only partly true, for they are very fond of the English rape-cake, and it is used at times to attract the wireworms from the crop; but the Indian, or Karachi cake, which is made from mustard, is distasteful to them. In mentioning the Rose chafer (*Cetonia aurata*) no mention is made of the grubs which very much resemble those of the cockchafer, and are equally destructive to the roots of plants. At the end of the description of each insect, under a separate heading the appropriate "preventive and remedial" measures are given, but nothing is said to show which are preventive and which are remedial.

### AMERICAN WOODS.\*

Mr. Hough sends us part 1 of this unique publication, in which the woods of America are shown in all their beauty of colour and texture by actual specimens instead of by pictures, the ordinary method of illustration. For the practical training of the architect, builder, wood-carver, joiner, cabinet-maker, &c., nothing could be better than to have sections of the actual woods to study from, and the work will probably commend itself to the notice of the heads of technical schools in Britain, as it has already commended itself to the educational authorities in America. The products of the American forests are inexhaustible and in beauty unsurpassed. Mr. Hough has brought them to the notice of the interested public in a way which makes it impossible they can be ignored by giving us, we might almost say, living pictures of them at a price which cannot be called an adequate compensation to him. We wish the publication all the success it is certain to achieve, as it certainly deserves it.

### HOW TO GROW BEGONIAS.†

TEN years ago the lovers of the tuberous *Begonia* were wont to describe it as "the flower of the future." Whatever may have been the aspirations of those who bestowed this prophetic name upon their favourite, there is no doubt that some important advance has been made in its cultivation and popularity, and that the transformation of the tuberous *Begonia* has been very largely brought about by such eminent growers as Messrs. Laing, Cannell, Jones and others in this country, while on the Continent, M. Crousse, of Nancy, has materially contributed to its improvement.

\* Hough's "American Woods." Part 1. By Romeyn B. Hough, Lowville, New York.

† "How to Grow Begonias." By G. A. Farini. (Sampson Low, Marston and Co.)

When a flower begins to attain to more than ordinary popularity its literature is sure to increase, and the tuberous Begonia is no exception to this rule. In style and get up generally, M. Farini's treatise will compare very favourably with any of its predecessors, for it is well printed on good paper and typographically leaves little or nothing to be desired. There are also several illustrations explanatory of the text. The work is divided into three main divisions, to which are added an appendix containing lists of the varieties grown by the leading specialists. Part 1 is mainly introductory, and the construction of a cheap greenhouse and heating apparatus forms an important feature of it. Part 2 deals with hybridisation, seed sowing, storing, starting the tubers, propagating, diseases, &c. Part 3 explains how to grow fine specimens for exhibition, and gives the names of various sorts described and recommended.

## FLOWER GARDEN.

### BRUGMANSIAS IN THE FLOWER GARDEN.

It is surprising that Brugmansias should not have become more popular as sub-tropical plants. The only possible reason why their culture has not been extended in this direction is from want of more room to store them away during the winter. The old-fashioned lofty greenhouse used to be well suited to this purpose, but it does not follow that no other place is suited to keep them during the resting period. The plants can be well kept in fairly dry cellars, being lifted from the open ground when first nipped by the autumn frosts. No large ball is required so long as a fair amount of roots is preserved, these and the base being protected by plenty of fairly dry soil. When stored in such a place, all the foliage may be removed. Where Brugmansias can be grown in large tubs and stood outside during the summer, taking them indoors when danger from frost is apprehended, it is possible to always turn them to good account when put into a slightly heated house. We remember to have seen some years ago some young plants which during the summer had made rapid growth in the open ground. So much was this the case, that they did not show for flower till the autumn frosts came. These were lifted, potted carefully and placed in ainery closed for early forcing. Here they soon became established and flowered most satisfactorily, the blooms coming in very useful for cutting at a dull season. When grown in tubs the plants can remain undisturbed for several years, firm potting in good loamy soil being observed.

In selecting a spot for planting Brugmansias outdoors some amount of shelter should be given, so as to protect the plants from high winds. A well-proportioned plant will make a good central object in a large flower bed, a ground-work being formed of some dwarfier plant, as in the illustration. The plant illustrated was raised from a cutting in Lady Thompson's garden at Guiseley, Yorks. It was planted out in June, 1895, and flowered twice, the beautiful white blossoms lasting till the first frost in October. P. T.

**Tufted Pansy Lucy Franklin.**—This is a very pretty rayless flower and of large size, while the plant is also free flowering. The colour is creamy white, the lower petal being suffused with yellow, thus making a pleasing contrast in each flower. Some masses in Mr. Sydenham's garden were exceedingly interesting recently, and intensified the fact of its usefulness when grouped in a large bed by itself. The constitution is good, and those on the look out for a pleasing

novelty would find in this one a pretty change.—C.

**Tufted Pansy Sir Robert Peel.**—In this the blossoms are of medium size and produced on long erect footstalks. The colour is best described as a deep primrose self, with orange eye, a shade of colour somewhat new. The habit is all that one could wish for, the growth spreading out along the ground something after the manner peculiar to Duchess of Fife and its sports. The flowers are freely produced and they are also rayless. Being a fixed colour, too, should be a distinct point in its favour.—D. B. C.

**Tufted Pansy Isa Ferguson.**—This is one of the darkest of the fancy type of the Tufted Pansies, and created a deal of interest in Mr. Septimus Pye's stand last year at the exhibition of the National Viola Society. The lower petals are almost velvety black, with a light blotch of blue on each petal, the upper ones being a pretty glossy blue. As an exhibition sort it is very useful, and may also be welcomed in the flower garden where blooms of this type are required. It is a free-growing sort and carries its

substance, and its colour is a fixed pale yellow. Those who know the variety Lemon Queen will appreciate this variety when it is stated to be of a similar shade of colour, perhaps a trifle darker, and the rays at certain seasons are heavier in character. The habit of this variety will prevent its use with those of a more tufted and less vigorous growth, but massed in a bed by itself it is very effective.

**Late-planted Spanish Irises.**—Last autumn I proposed planting a batch of Spanish Irises late in the season in the hope of prolonging the season of blooming. I also asked whether any reader had tried the experiment and with what result. "E. J." replied, stating that he once tried the experiment, but that it was practically a failure, as growth instead of being normal was weak and stunted, and that those which grew flowered simultaneously with those planted in November. This is exactly my experience; indeed, not only am I now cutting blooms from both batches, but those on the late lot are far inferior to the others. The only way of prolonging the season is by planting in different aspects,



*Brugmansia in the flower garden at Park Gate, Guiseley, Yorks.*

flowers on long footstalks. The habit, too, is somewhat better than is generally the case in these kinds.—H. N.

**Tufted Pansy Pembroke.**—So far as one is able to judge after growing a large number of new yellow sorts alongside of the older ones, this variety appears to stand out distinctly from many others as a sort that has come to stay. The flowers are of large size, rich clear yellow, fragrant and freely borne. Most important of all, its constitution is robust, and although the habit is not so dwarf and compact as one expects in the newer introductions, yet its many good points stamp the variety as one of the very best rayless yellow sorts of the last two or three years. This was raised at Tamworth last season, and already many thousands have found their way into gardens all over the country.—C.

**Tufted Pansy Lord Salisbury.**—This is probably one of the most vigorous growing sorts of recent introduction, but, although so very strong in its growth, it does not get so ungainly as many others. Its chief points of merit are large, circular, bold-looking blossoms of much

those on a north border in a deep, moist soil coming in ten days later than where the sun reached them. Canary Bird, yellow, and Lady Blanche, white with yellow throat, are excellent.—J. C.

**Iris hexagona var. La Mance.**—This remarkable variety is now in flower in my garden, and it is, I think, the finest Iris among the known North American species. The falls, which are considerably over 2 inches in length, are of a rich purple-blue, shading to white, with a slight marking of yellow down the claw. The styles are light green, and the green colour of the centre of the flower is a noticeable feature, adding to its beauty as well as distinctness. Both standards and falls are of spreading habit. I am indebted for my plant to the great kindness of Mr. J. N. Gerard, of Elizabeth, New Jersey, by whom it was named, and by whom it is described in some notes which will be found in THE GARDEN, vol. XLVIII., p. 245. Mr. Gerard tells me he finds it hardy with him. This I have not proved, though I think it likely that it would prove the same in the majority of gardens in the south of England,

but it is quite evident that this variety possesses what Mr. Gerard claims for it, viz., a propensity to bloom freely, a quality which is somewhat conspicuous for its absence in the typical *L. hexagona*—a plant, by the way, which, partly perhaps from this fault and partly from its doubtful hardiness, is seldom met with in English gardens.—J. C. L., Maidstone.

## STOVE AND GREENHOUSE.

### CLERODENDRON FALLAX.

PERHAPS this is the best of all the shrubby species of *Clerodendron*, and if only its culture were taken up with the vigour its merits entitle it to, it would run the climbing kinds hard for a place in popularity. It is not difficult to grow, and one of the most effective of stove plants. The present is the flowering season, later plants carrying the display into August or September. The panicles of flower are bright scarlet. To keep the plants in flower as long as possible, place them in a cool, partially shaded house. The conservatory in some places is very unsuitable to stove plants even while resting, and in such this *Clerodendron* should not find a place while in bloom; it would, nevertheless, be wrong to say it is unsuitable for conservatory decoration. While in flower the plants must not be too much dried, but the fact must not be lost sight of that the apex of the season's growth has been reached, and when once the blossoms are over, the sooner in reason the plants are cut over for the season the better. This allows of the stems being made into cuttings, while the old plant must be kept on the dry side afterwards. During the winter the house in which this *Clerodendron* is grown should be kept warm, as being a native of Java too little heat is dangerous. As long as it is kept dry it will take no harm in a minimum temperature of 60°, but far below this it is not safe to go. The plants should not be repotted until they have made a little growth, just an inch or so to show that the roots are moving; then they may be repotted, single-stemmed plants flowering finely in 7-inch pots and larger ones in a size or two larger. Drain the pots well, and prepare a mixture of sound fibrous loam and peat with a plentiful addition of well-dried cow manure, for these plants have a lot to do in a few months and are gross feeders. It would be wrong to say pot loosely, yet the material must not be too tightly rammed, and where the loam is of a nature prone to run close, add a plentiful sprinkling of the best coarse silver sand. The plants may be then taken to a house with a brisk moist temperature, grown on rapidly until the flowering season, and if they can have the assistance of a little bottom-heat at starting such as is afforded by plunging in tan or similar material, it puts them rapidly out of harm's way in the matter of the drying off of the young shoots. This they will do sometimes after disturbance, and it is necessary to be very careful with the watering at first. Soot water well diluted is an excellent stimulant to this plant when the pots are filled with roots, and the same material sprinkled about under the stages and used for damping floors is of material benefit owing to the ammonia which it generates in the atmosphere. Insects dislike this kind of moisture, especially scale and its near relative mealy bug. Considerable trouble will be found with plants infested with the latter, but if taken in hand when only a few insects are present these may be easily destroyed. I once cleared a nice lot of this plant by dipping a very fine-

pointed brush pencil in methylated spirit and touching the insects with this. Heavy syringing is not advisable, but light dews in the earlier stages can do no harm. As mentioned above, this plant may be propagated by cuttings, these consisting of lengths of the stems when cut down. Any bit with about three or four joints will strike if placed in pots of sandy soil, thoroughly soaked with water and plunged in a propagating pit. R.

**Evergreen Begonias.**—Since the introduction of the many beautiful forms of summer-flowering *Begonias* the winter-flowering or evergreen section seems to have fallen into the background. Some of the varieties, however, such as *fuchsoides* and *weltoniensis*, are amongst the most useful subjects for general decoration at a time when flowering plants are none too plentiful. They are most accommodating, as if the main batch of plants is brought on in a comparatively cool temperature and a few introduced into more heat at intervals, an almost continual succession of bloom can be maintained. A mixture of good fibrous loam three parts and one part peat, leaf-mould, and silver sand suits them well. Some successful growers give a small quantity of thoroughly decomposed cow manure. The best way after flowering is to keep the roots slightly drier for a short time and then cut back, shake out, reduce the balls, and repot, giving them a genial moist temperature. *Begonias* will do well for as long a time in small pots as most things, but if large bushes are desired, liberal shifts must be given. *Weltoniensis* looks exceedingly well grown in baskets and suspended from the roof of a warm conservatory, and some of the others are equally good for this purpose.—GROWER.

**Euphorbias.**—For brilliancy of colour and usefulness in drawing-room and dinner-table decoration there are few things blooming in the dead of winter that pay for attention better than *Euphorbias*. *Jacquiniaeflora* is no doubt the most valuable, as its habit of growth allows of its being grown in the ordinary way in pots. Splendens, on account of its spiny nature, requires really to be grown so that its growths can be trained over a wall or trellis. Either in a pot or planted out and liberally treated, *E. jacquiniaeflora* will soon cover a good space and supply innumerable bracts, which are invaluable for bouquets or button-holes. Both varieties may be increased by cuttings, but some care is necessary. After detaching them from the parent plant, allow the milky matter which oozes from the cuttings to dry up. Young rooted plants need growing on in a strong, moist heat, giving them a mixture of loam, peat, a little leaf-mould, and sufficient silver sand to keep the whole open. If bushy plants are required for ordinary plant stove decoration, pinching once or twice must be practised; but the finest bracts of *Jacquiniaeflora* are produced on unstopped shoots, which will sometimes reach a length of several feet. Old or one-year-old plants should have a rest after flowering and be kept dry at the roots, being pruned back about May, and when started, shaken out and repotted in good fresh compost, afterwards treating them to a brisk, moist heat and a light position near the roof glass, shading a little during bright sunshine. A number of yearling plants should always be kept in case the cuttings should not strike satisfactorily.—J. C.

**Abutilons in winter.**—There are now many very beautiful varieties of *Abutilons*, and plants when well grown are most useful for winter decoration, the blooms being also well adapted for arranging in small glasses. For the production of good bushy plants for late autumn and winter work, cuttings should be taken in February. A few old plants may be cut back and placed in a gentle moist heat, and when the new growths are an inch or so long, they strike pretty readily if placed under a bell-glass or handlight in a gentle bottom heat. As soon as growth has started, a little air must be admitted, this being

gradually increased until the glass is entirely removed. When 1 inch or 2 inches of growth has been made the cuttings should be potted off into small pots, placed near the glass in an intermediate house and carefully watered till well established. The next shift may be into a 4½-inch pot, still keeping them in the same quarters and syringing the plants on fine sunny afternoons. Towards the end of May a warm pit or frame will be the best position for them, and if gradually inured to the air they may be fully exposed on calm, warm days in June. Some growers stand the plants out in the open during summer, and if this is a dry, sunny one they do very well; but *Abutilons* are very impatient of water at the roots, and any excess of this soon produces a yellow, unhealthy condition of the foliage. If the young plants are pinched when say 6 inches high, good stocky plants will be formed. Manure water may be given in a weak form when the plants are in full growth, and if they are wanted to flower as late as possible or right through the winter, any early-formed blooms should be removed. In October a light airy house, with a night temperature of 50°, suits them best.—GROWER.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

JUNE 29.

A TRULY wonderful display has to be recorded on the above date. A finer exhibition as a whole has never been seen in the Drill Hall. It is to be hoped that some at least of the many visitors now in the metropolis took the advantage of inspecting it; at any rate there was a good attendance of Fellows and others interested in gardening. Hardy flowers were strongly in evidence, notably *Roses* and hardy border flowers. Of *Roses* there was a great diversity, and it was a welcome sight to see that "garden" *Roses* were well represented as contrasted with "exhibition" varieties. The competition in the *Rose* classes was, on the whole, very good, whilst the quality was excellent. *Orchids* were not so conspicuous, but a grand group was sent by Messrs. Veitch and Sons. There were a few excellent examples of fruits, notably of *Peaches*, *Plums*, and *Cherries*. Two of the most notable groups on this occasion were the grand display of conifers, rich in the golden and glaucous forms, and the superbly flowered specimen plants of *Malmaison Carnations*, the former from Messrs. J. Veitch and Sons, and the latter from Mr. J. P. Morgan, Dover House, Roehampton (gardener, Mr. McLeod).

### Orchid Committee.

A first-class certificate was awarded to

**LELLO-CATTLEYA EUDORA SUPERBA** (C. Mendeli crossed with *L. purpurata*).—The sepals and petals are delicate rose veined with a darker shade of colour, the lip rich crimson-purple in front, the side lobes white shading to yellow at the base, where it is lined with purple to the base. The plant is intermediate in character between the two species both in the shape of the flower and habit of growth. From Messrs. J. Veitch and Sons.

An award of merit was given to

**CYPRIPEDIUM MRS. E. V. LOW**, in which the dorsal sepal is white, shading to green at the base, and thickly spotted with dark brown spots. The petals are white slightly suffused and veined with purple, lip pale greenish-white spotted with purple. The plant carried two flowers. There is no doubt *C. niveum* has been used in its production. From Messrs. Hugh Low and Co.

Messrs. J. Veitch and Sons were awarded a silver *Flora* medal for a large group, prominent amongst which was a large specimen *Cypridium superbiens* (Veitchi) with upwards of twenty flowers. *C. Parishii* was represented by a huge specimen with four spikes of flower. Several grand forms of *C. Curtisi*, *Dendrobium Phalen-*

opsis Schröderæ, *Dendrobium glomeratum* with extra large, finely coloured flowers and *D. porphyrogastrum* (D. Huttoni crossed with *D. Dalhousianum*), sepals and petals pale lilac, lip flat and open, the front of the same shade of colour as the petals, were also shown. *D. illustre*, a hybrid between *D. chrysotoxum* and *D. Dalhousianum*, sepals and petals bright yellow, highly polished, the lip about 1 inch in width, the front half yellow, margined and thickly covered with hairs, was also noteworthy. Amongst the hybrid *Cattleyas* were *Lælio-Cattleya eximia* (L. purpurata × C. Warneri), sepals and petals deep rose, lip rich crimson-purple, margined with rose in front, the base deep yellow, lined with brown; several forms of L.-C. *Cambamiana* and L.-C. *Ascania*, the sepals pale yellow, shaded with rose, the petals cream, the lip purple in front, shading to orange-yellow at the base. *Sobralia Veitchi*, S. *Wilsoni*, and S. *macrantha* were also very fine. *Disa Veitchi* was represented by numerous finely-flowered plants. *Phalanopsis Vesta*, a hybrid between P. *Aphrodite* and P. *rosea leucaspis*, the sepals and petals white, slightly suffused with rose, the front lobe rose, shaded with yellow and spotted with brown at the base; the side lobes rose, shading to white at the base, where it is spotted with bright brown; P. *Ladde-vioacea*, a hybrid between P. *Ladde-vioacea* and P. *violacea*, intermediate in character between the two species used in its production; finely flowered *Epidendrums* and *Oncidiums* in variety made up an interesting display. Messrs. H. Low and Co. sent a small group consisting of finely-flowered *Cattleya Mossie* in variety, the best being a good form of C. M. *Reineckiana*, the lip finely marked and beautifully margined with white. *Cattleya gigas*, *Oncidium macranthum*, and *Odontoglossum crispum* were also well represented. A silver Banksian medal was awarded. Messrs. F. Sander and Co. had arranged amongst their stove and fine-foliaged plants *Sobralia Veitchi*, S. *Amesæ*, good varieties of *Odontoglossum Harryanum*, a hybrid *Cattleya* of the C. *Normani* section, *Oncidium Batemannianum*, a delicate form of *Miltonia vexillaria*, *Cypripedium bellatulum Albani*, and *Lycaste leucantha*.

Mr. F. Hardy sent a small, but interesting group, which contained good forms of C. *Mossie*, the most distinct being C. M. *Hardyæ*, with pure white sepals and petals, lip white, with rose veinings in the centre and yellow at the base, C. *Wagneri* with two flowers, a dark form of L.-C. *Arnoldiana* with three flowers, L.-C. *Hippolyta*, with two of its distinct orange and purple flowers, some remarkably well-bloomed plants of *Miltonia vexillaria superba* with rose-coloured flowers, having a dark crimson-purple disc in the centre, margined with white, and good forms of *Lælia tenebrosa*. Mr. T. B. Haywood sent two spikes of the lovely *Miltonia Daisy Haywood*, with seven and nine flowers respectively. In this the flowers are pure white, with the exception of the yellow disc in the centre. Mr. N. Blandford sent *Cattleya Warszewiczii* (Blandford's var.), a form in which the usual disc in the front of the throat had disappeared. Mr. R. I. Measures sent *Cypripedium leucochilum grandiflorum*, a wonderfully fine-shaped variety, larger and far superior in the markings to the typical form previously certificated; and C. *Salus* (concolor × *Dayanum*), intermediate in character between the two species indicated in its production. The Rev. F. Paynter sent a cross between *Phaius Humbloti* and *bicolor*, in the way of P. *Cooksoni*, but with smaller flowers. Mr. H. A. Tracey, Twickenham, sent cut flowers of *Cattleya Mendeli*, one having a rich crimson-purple lip, finely fringed in front. Another variety had the petals splashed, as in C. *Triane Bakhousiana*.

#### Floral Committee.

A first-class certificate was given to—

**THUJA GIGANTEA AUREA.**—A distinctly marked golden form of this well-known conifer, the golden tint pervading the young growth in a profuse fashion. Messrs. J. Veitch and Sons, Chelsea.

Awards of merit were given to—

**CALOCHORTUS CLAVATUS.**—A bright canary-yellow, very distinct and showy, blooms large, the petals broad, growth robust and sturdy. From Messrs. Wallace and Co., Colchester, and M. Van Tubergen, Haarlem.

**CARNATION HAMPDEN.**—A rich dark terra-cotta, petals incurved, non-splitting, deficient in fragrance. The colour being distinct, it is a desirable novelty, the flowers being of fine form. Mr. Martin Smith, Hayes, Kent.

**ROSE (H.T.) MARQUISE LITTA.**—A deep rose-coloured variety, somewhat loose, having large petals; a profuse-flowering variety of vigorous growth and with fine foliage. Messrs. W. Paul and Son, Waltham Cross.

**ROSE (H. TEA) SOUVENIR DE PRESIDENT CARNOT.**—White, with deep flesh centre in the bud stage, of fine form. A decidedly distinct and desirable novelty, not unlike *Souvenir de la Malmaison* in colour. Messrs. Paul and Son, Cheshunt.

**ROSE (H. TEA) MME. A. CHATENAY.**—A very bright and attractive Rose, in the way of *Grace Darling* save in its colour, a soft pink, with salmon-pink centre. A fine garden variety and quite distinct. Messrs. Paul and Son.

**ROSE (H. TEA) KAISERIN AUGUSTA VICTORIA.**—Pale creamy white, with slight tint of palest green in centre; form good, stout foot-stalks. A fine Rose for any purpose. Messrs. Paul and Son.

**BEGONIA (TUBEROUS) LADY PEARSON.**—A bright orange-scarlet double of immense size and very full, flower-trusses erect and sturdy, the foliage relatively small. Messrs. J. Laing and Sons.

A botanical certificate was given to *Encephalartos gracilis*, a distinct and novel plant with fronds 4 feet to 5 feet in length, the mid-rib profusely covered with a dense tomentose down, the pinnae rounded and small, being needle-like in form; a fine plant. Messrs. Sander and Co., St. Albans.

A very fine collection of cut hardy flowers, staged by Messrs. Barr and Sons, Covent Garden, contained some especially interesting lots of Iris, notably a collection of the *Kämpferi* varieties. Other good things were *Coreopsis grandiflora*, large and very richly coloured flowers; *Thalictrum angustifolium*, *Hemerocallis aurantiaca major*, H. *Thunbergi*, the pretty lemon-yellow variety; H. *fulva*, a dull orange-red, and a number of remarkably fine *Delphiniums* (silver Banksian medal). A similar collection of hardy flowers came from Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, and was very effectively arranged with a high bank in the centre. Among the flowers shown were *Liliums*, *Iris*s, *Poppies*, many kinds of *Dianthus*es and *Pinks*, *Campanula punila*, C. *Hosti alba* and C. *cordata*, with long flowering spikes very much like a Foxglove, the whole forming a very striking blaze of colour (silver Flora medal). Messrs. Kelway, of Langport, Somerset, had a fine collection of *Delphiniums*, *Gaillardias*, *Iris Kämpferi*, and miscellaneous hardy flowers. Among these last were *Salvia dealbata*, a very remarkable looking plant with mauve-coloured bracts and lilac blooms, *Morina longifolia*, very pretty, with an abundance of cherry-pink blooms, and *Centaurea ruthenica*. The *Delphiniums* included some really superb kinds, of marvellous strength and substance and splendid colour. A few of the most striking varieties were Albert Edward, purple and dark blue; Amyas Leigh, azure-blue and lilac; Sara, a very rich sky-blue; Etoile, a dull purple double, very symmetrical in form; and The Czar, a bright royal blue. The varieties of *Iris Kämpferi* were very fine, the most striking being Beauty, Bride Elect, pure white, and Via Lactea. A few very good *Cannas* were also included in this collection (silver Banksian medal). Another group of miscellaneous hardy flowers came from Mr. M. Prichard, Christchurch, Hants, and contained some beautiful forms of *Iris Kämpferi*, *Pyrethrum Hamlet*, a very lovely rose-pink flower; *Aconitum pyramidale*, a bunch of the charming *Catananche cerulea*, and some strong *Eryngiums* (silver Banksian medal). Messrs. Wallace and Co., Colchester, again had a fine collection of their beautiful hardy

flowers, chiefly *Calochorti* and *Liliums*, with a few *Iris*es. *Calochortus citrinus*, a beautiful pure yellow, very handsomely marked in the cup; C. *Gunisoni*, a lovely pure white, with green at the base of the petals; and a number of forms of *venustus* and *Eldorado* were striking, the latter strain showing an immense range of colour (silver Flora medal). Messrs. Cheal and Sons, of Crawley, also staged a large collection of hardy flowers and shrubs, including some charming garden *Roses*, *Bardou Job*, York and Lancaster, *Cecile Brunner*, and *Gloire de Polyantha*, a number of beautiful fancy *Pansies* and bedding *Violas*. Among the shrubs, *Fraxinus aucubifolia*, *Prunus Pissardi*, *Ulmus Dampieri aurea*, *Acer Platanus purpurea*, and *Sambucus foliis luteis* were noteworthy (silver Banksian).

A beautiful group of Sweet Peas, very prettily staged, was shown by Messrs. Veitch and Sons, Chelsea, and included some new American varieties. Some of the best shown were *Blanche Terry*, which should take the place of *Painted Lady*; *Maid of Honour*, a very pretty pale lilac and white; *Dorothy Tennant*, rich mauve; *Stanley*, one of the best of the dark blues; *New Countess*, a very charming pale blue; *Orange Prince*, a bright orange-pink; and *Red Riding Hood*, a curiously-formed flower. Sweet Peas were again charmingly shown by Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants. Some of the most pleasing bunches were composed of *Creole*, a very pretty pinkish lilac, delicately shaded; *Lady Beaconsfield*, in soft shades of cream and blush; *Mrs. Eckford*, rich cream colour; *Royal Rose*, *Crown Jewel*, pink and white; *Celestial*, a very soft shade of light blue; and *Meteor*, a fiery-pink (silver Banksian medal). Messrs. Dobbie and Co., Rothsay, also staged a good collection of Sweet Peas, among them *Juanita*, a soft shade of mauve; *Triumph*, shades of bright pink; *Coquette*, creamy white, tinged with blush; *Countess of Shrewsbury*, delicate rose and white; *Lovely*, a fine variety of exquisite rose-pink colour; and *Brilliant*, a very bright and showy red. From the same firm came a very extensive collection of *Violas* and *Pansies*, the latter being huge blooms, very fine in form and colour (silver Flora medal). From Messrs. Cannell and Sons, Swanley, came a group of magnificent tuberous *Begonias*, all splendidly grown plants with very beautiful foliage, and bearing quantities of large and handsome blooms. A few of the best were Mr. Pack, a large bright pink; *Mrs. Newman*, deep rose; W. *Marshall*, a beautiful orange single; *Miss Agnes Stewart*, a large lemon-yellow single; *Lady Mary Wood*, a very delicate salmon-pink double; *Lady Salmon*, a similar flower in light yellow; and *Lord Sherbourne*, a large and very elegant flower of fiery-crimson colour (silver Banksian medal).

A fine feature of the show was a splendid group of *Malmaison Carnations* staged by Messrs. Cutbush and Son, Highgate. The plants were dwarf and wonderfully strong, the wood perfectly clean and healthy, and the flowers very full, of great size and fine substance. *Princess of Wales*, *Blush*, *Nell Gwynne* and *Rose* were the chief kinds shown (silver Flora medal). The finest *Carnations* in the show came from Mr. J. P. Morgan, Dover House, Roehampton (gardener, Mr. McLeod). These consisted of about fifty magnificent plants, enormous in size, and each one a model of good culture, both foliage and flowers being superb (silver-gilt Flora medal). Another exhibit of very great interest was a group of plants staged by Messrs. F. Sander and Co., St. Albans, and containing many rare and beautiful specimens. Very conspicuous was a batch of plants of *Watsonia iridifolia O'Brieni*, bearing spikes of beautiful white flowers. *Caladium albanense* was well shown, also a great number of varieties of *Anthuriums*, *Streptocarpus* and *Orchids* (silver-gilt Banksian). Messrs. Veitch and Sons, Chelsea, showed a box of their beautiful javanico-jasminiflorum hybrid *Rhododendrons*, including the following lovely varieties: *Souvenir de J. S. Mangles*, a vivid orange-pink; *Anabile*, a very soft rose; *Diadem*, bright orange; *Conqueror*, scarlet; *Primrose*, a

delicate pale yellow; Princess Beatrice, blush-white; President, orange-yellow; Maiden's Blush, Ceres, clear golden yellow, and Virgil, soft clear buff colour. From the same firm came baskets of the following shrubs: Escallonia Phillipiana, Indigofera decora alba, Cytisus nigricans, and a very delightful lot of Robinia hispida. Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, sent a large group of Adiantums, comprising a wonderfully large range of varieties, and forming a welcome relief after the blaze of colour afforded by the floral exhibits. A few particularly interesting things were A. capillus-Veneris imbricatum, A. caudatum, A. setulosum, A. cultratum, A. reniforme asarifolium, A. Hemsleyanum, A. macrophyllum, A. culpodas, A. Veitchii, A. hispidulum and A. fulvum (silver-gilt Banksian medal). A fine group of conifers was shown by Messrs. Veitch and Sons, Chelsea, and was awarded a gold medal. A few of the most striking things were Retinospora pisifera sulphurea, R. plumosa aurea, R. filifera, R. pisifera squarrosa, R. obtusa aurea, R. plumosa, R. obtusa gracilis, R. plumosa argentea, Cupressus nutkaensis, C. thuyoides leptoclada, C. Lawsoniana lutea, C. Lawsoniana albo-variegata, C. Lawsoniana Allumi, Abies excelsa inverta, A. Douglasii glauca, A. Veitchii, A. nobilis glauca, A. orientalis aurea, A. Sieboldii, and Thuja gigantea aurea.

A group of Roses of exceptional interest came from Messrs. Wm. Paul and Son, Waltham Cross, and included a selection of varieties introduced by the exhibitors during the Victorian Era. Among them were Spenser, Sylph, Pride of Waltham, Star of Waltham, Duke of York, Clio, and Enchantress. The pot plants included Merveille de Lyon, Spenser, Capt. Hayward, and White Lady (silver Banksian medal).

#### Fruit Committee.

Some very fine Plums and Cherries came from Gunnersbury House. Peaches also were fine, and Messrs. Laxton's new varieties of Strawberries most interesting. Melons, which were shown in quantity, were in most cases poor.

An award of merit was given to—

**STRAWBERRY MENTMORE.**—A dark glossy red conical fruit, not unlike La Grosse Suerée in colour. It is of good quality and a valuable main-crop variety. It is a cross between Noble and British Queen, flesh firm and crimson right through. From Messrs. Laxton, Bedford.

Messrs. Laxton also sent several other new seedlings of great merit, but some over-ripe. Commodore was most promising. This is the result of crossing Royal Sovereign and Latest of All, and was thought an excellent addition to the mid-season varieties. Alma, which has for its parents James Veitch and Sir C. Napier, is a large fruit, but somewhat tender. Profit, a cross between James Veitch and Sir J. Paxton, is a nice fruit, and promises to be a valuable one for market. These new varieties were requested to be sent to Chiswick for trial to test fruiting qualities. Some fine baskets of Monarch and Leader were staged by the same exhibitors. Mr. Hudson, Gunnersbury House, Acton, sent some very fine Plums from pot trees. Reine Claude de Comte Athlens was very fine; Jefferson's, Kirke's and Early Transparent Gage were also good. These, with Bigarreau Napoleon and Black Circassian Cherries, deserved a better award than the cultural commendation given. Mr. G. Kelk, South Villa, Regent's Park, sent three boxes of Peaches, receiving a cultural award. Dymond was very fine, Royal George and Dr. Hogg being highly coloured. Mr. Wythes, Syon House, sent the Loquat in fruit, several fruits being borne on a stem. They are not unlike Apricots in colour. The plants had been grown in a cool conservatory. The same exhibitor sent a seedling Melon. Melons were shown in quantity by Mr. Burrell, Westley Hall, Bury St. Edmunds; Mr. Martin, East Cowes, Isle of Wight; and Mr. Davies, Nidd Hall Gardens, Yorks. Mr. Beckett, Aldenham House, Elstree, sent a very fine dish of Early Morn Peas, a valuable addition to the early Marrows. It was asked to be sent to Chiswick

for trial. Messrs. Laxton also sent a new Pea, Thomas Laxton, a promising variety, a seedling from Gradus and Earliest of All. Messrs. Kelway, Langport, sent fine Gradus Peas and Bunyard's Exhibition Broad Beans.

#### ROSE SHOW.

In the competitive classes there was a fair number of exhibitors. For twenty-four single trusses the first prize went to Mr. T. B. Haywood, Woodhatch Lodge, Reigate (gardener, Mr. C. J. Salter), for a very beautiful lot of blooms, perfectly clean throughout, and of fine form and size. The best blooms were S. Marie Rodocanachi, Caroline Testout, A. K. Williams, Francois Michelon, Comte Raimband, Capt. Hayward, Mrs. J. Laing, Jeannie Dickson, La France, Horace Vernet, and Pride of Waltham. Mr. C. J. Grahame, Wrydelands, Leatherhead, gained the second prize for a very good exhibit, having fine blooms of White Lady, Viscountess Folkestone, Victor Hugo, Mrs. John Laing, Chas. Lefebvre, and Prince Arthur. In the class for twelve single trusses, distinct, Mr. O. G. Orpen, of Hillside, West Bergholt, won the first prize with good shapely blooms, Mrs. W. J. Cant, Fisher Holmes, S. M. Rodocanachi, and Mme. Luize being the best. The second prize went to Rev. A. Foster-Melliard, Sproughton Rectory, Ipswich, who had good blooms of Maréchal Niel, Lord Macaulay, Mrs. Sharman Crawford, and Gustave Piganeau. For six single trusses, distinct, Mr. G. W. Cook, Torrington Park, N. Finchley, was first with Medea, La France, Mrs. John Laing, Ulrich Brunner, Caroline Testout, and Capt. Hayward. Rev. F. Page-Roberts, Seole, Norfolk, was a good second. For nine single trusses of one variety, Mr. C. J. Grahame was first with pretty blooms of Kaiserin Augusta Victoria, and the second prize was won by Mr. T. B. Haywood, who showed Mrs. John Laing. For six singles, the first prize went to Mr. O. G. Orpen for exceedingly fine blooms of K. A. Victoria, and the second to Mr. R. H. Langton for La France. Mr. O. G. Orpen was again successful for twenty-four single trusses of Teas, having a very beautiful exhibit, containing lovely blooms of Souvenir d'Elise Vardon, Anna Ollivier, Ernest Metz, The Bride, Sylph, Catherine Mermet, and Princess of Wales. Mr. Grahame was a good second, having fine blooms of Mme. de Watteville, Cleopatra, Medea, and Innocente Pirola. For twelve singles, Rev. Hugh A. Berners, Harkstead Rectory, Ipswich, gained the first prize, having nice flowers of Ernest Metz, Catherine Mermet, Jean Ducher, Cleopatra, and Edith Gifford. Rev. A. Foster-Melliard was a very close second with Maréchal Niel, Innocente Pirola, Caroline Kuster, Ethel Brownlow, and Comtesse de Nadaillae. For six singles, the first prize went to Rev. F. Page-Roberts for a very good exhibit, containing C. de Nadaillae, The Bride, Maman Cochet, and Innocente Pirola. Mr. R. H. Langton was second. For nine singles of one variety, Mr. C. J. Grahame was first with neat and well-coloured blooms of Mme. Cusin. Mr. O. G. Orpen was a good second, showing Anna Ollivier. For six singles of one variety, Mr. R. H. Langton was first with Edith Gifford, and Rev. Foster-Melliard second with Souvenir d'Elise Vardon.

A pretty group of garden Roses was shown by Lord Penzance.

**The weather in West Herts.**—A warm week, particularly at night. On Midsummer Day the highest reading in shade was 82°, which is warmer than any reading previously registered here this year, and on three nights the exposed thermometer did not fall lower than 55°. The soil at 2 feet deep is now 3° warmer, and at 1 foot deep 4° warmer than is seasonable. Rain fell during the week to the total depth of rather more than an inch, and on the 24th, during a thunderstorm in the evening, it was falling for 3 minutes at the rate of 1½ inches an hour. On the morning of this day the heat was very great in the sun, the black bulb solar radiation thermometer rising

to 140°, or higher than in any June for ten years. June, although so changeable in temperature, was, taken as a whole, a decidedly warm month. Rain fell on twelve days to the aggregate depth of 2¾ inches, or about half an inch in excess of the June average. The sun shone on an average for 5½ hours a day, which is rather a small record for the month.—E. M., *Berkhamsted*.

## NOTES OF THE WEEK.

**Aconitum orientale** differs from the majority of its kind by its more dwarf habit, its distinctly cut foliage, and the nearly pure white blossoms that appear in early June on stems little more than 18 inches high.

**Iris Kœmpferi.**—The Drill Hall meeting on the 29th ult. brought together quite a host of these beautiful flowers, many of the large spreading blossoms being from 6 inches to 8 inches across and remarkably varied in colour.

**Clematis Fairy Queen.**—This is a fine variety for pillars or for rambling amidst the larger forms of Ivy on walls. In such positions the handsome white blossoms, which are also large, are of the showiest description and very telling at a distance.

**Wahlenbergia tenuifolia** is a neat species for the rock garden in midsummer, with narrow leaves and tufts of blue flowers on short, hairy stems. It is quite a compact-growing species, and not difficult of culture in gritty loam in sunny chinks of rockwork.

**Incarvillea Delavayi in Scotland.**—Scotland is not behind in flowering Incarvillea Delavayi. For the last three weeks it has been in great beauty here. The seed was sown two years ago, and the plants have stood the last two winters in a climate not very suitable for tender things.—W. H. M., *Manches, Dalbeattie*.

**Pratia angulata.**—As a carpet plant in moist spots, in the bog garden, or indeed any position where moisture may be secured, this is invariably a success, and equally so when grown in shallow pans, for in this way the latter may be utilised in the cool greenhouse. Just now the plant is freely covered with its pure white blossoms.

**Chrysanthemums in June.**—When the really good hardy border flowers—to say nothing of Lilies, Roses, Carnations and other things—are in their fullest beauty, Chrysanthemums are not wanted. Yet a few miserable examples were to be seen at the Drill Hall this week, and, as usual with such out-of-season exhibits, poor and altogether out of character.

**Dianthus Napoleon III.**—When well grown this is perhaps the most richly coloured of all the mule Pinks, and at times flowering so abundantly as to endanger the stock. For this reason a portion should be set aside for propagating, which is easily effected when cuttings can be secured in September. In the border in groups the rich crimson flowers of this plant are very telling.

**Iris Monnieri.**—This grand border plant was included in one or two collections at the meeting of the Royal Horticultural Society on Tuesday last, and very fine it is at this season of the year; indeed, this species, as well as other of the late kinds, appears to have been well suited this season, that is, so far as the established clumps are concerned. In the latter condition the stout stems will reach to nearly or quite 4 feet high.

**Gillenia trifoliata.**—This is one of the most charming hardy plants of the week. Although curiously light and elegant, it yet has a certain stability about it that is wanting in such things as the Gypsophila and similar plants. Like the herbaceous Spireas, G. trifoliata is a capital subject for planting on the margins of streams or any moist, half-shaded position, and if the soil is light and porous the growth is very free.

**Calochortus clavatus** is perhaps the largest flowered of this pretty group of bulbous plants,

the blooms each measuring some 4 inches across and of a clear rich yellow. The variety possesses a distinct branching habit and flowers abundantly. This handsome form received the award of merit on Tuesday last from the Royal Horticultural Society, before whom it was exhibited by Messrs. Wallace and Co., as also C. G. Van Tubergen, Holland.

**Campanula Hosti alba.**—This is a very useful and beautiful kind, with very pure white flowers on slender stems of about 18 inches high, and a kind that is not very abundant in gardens, too frequently an inferior form of *rotundifolia* having to do duty for it. The true plant has larger blossoms, that are rather more open and less drooping. The very long leaves are also a distinguishing character of the plant, which is worth a place in every garden.

**Garden Roses at Colchester.**—Single and semi-double Roses were very well shown at Colchester last week, and proved a very interesting portion of a somewhat poor show. The Austrian Briers in variety, Lord Penzance's Sweet Briers and one or two of the *R. moschata* type were very handsome. In one stand was a charming bunch of the lovely little *Ma Capucine*, one of the most suitable of all Teas for growing in a loose, natural way. All the exhibits in this class were arranged with ample foliage—the most artistic way of showing Roses.

**Lathyrus rotundifolius.**—This is probably the earliest flowering of the everlasting or perennial Peas, and for this reason valuable. The reddish pink blossoms begin to appear quite late in May or early in June, and continue for some considerable time. For its earliness alone the plant is worthy of more attention both from gardener and florist, as it is quite possible to improve by careful selection both the colour and size of the original species. Good culture alone, however, is capable of much in this direction, and when well grown it will reach 5 feet or 6 feet high.

**Gladiolus The Bride.**—Now and again when some good clumps of this useful plant appear in the hardy plant garden, we gather some idea of its usefulness, though we cannot but regret that so chaste a flower is not largely grown in private gardens generally. In the cut state its pretty spikes of snow-white blossoms will compare with the choicest of flowers, which is certainly saying a good deal. Cut in the earlier stages of development, almost every flower to the tip of the spike will expand in water, while the slender, graceful stems on which the flowers are borne are especially well suited for vases. Planted 6 inches deep it is quite hardy in many gardens.

**Polygonum baldschuanicum** is a recent addition to the list of hardy climbing plants, and should prove of value when better known. In many respects this plant is distinct from the other species of this genus, possessing a good climbing habit and woody stems of much the same substance as the Virginian Creeper, and deciduous like this latter. The plant appears quite hardy, breaks away freely from the old stems, and when in full leafage and producing its white and pink panicles of blossoms is very pleasing. This species is now flowering in the herbaceous ground at Kew, where may be seen a fine plant perhaps 10 feet or more high. Native of East Bucharra.

**Tufted Pansies from Chirside.**—Dr. Stuart sends us from his garden at Chirside a gathering of these seasonable and sweet-scented flowers. Among those sent are *Florizel* and *Rosea pallida*, which seem to us too much alike. *Border Witch* is very pretty, but it seems to vary in its shades of colour. The best one sent is *Bedding Blue*, a very rich dark blue, with a yellow eye. This is by far the finest blue we have yet seen, and if the plant flowers freely it will be a great acquisition. We should like to know something of the habit of this, as if it partakes of that of *Blue Gown* it will become popular, the colour being so telling in the mass. Quite the *Fashion* is a larger flower and of a paler blue. Dolly

Varden is distinct, but we much prefer the self colours.

**Hemerocallis aurantiaca major.**—Among the hardy cut flowers at the Drill Hall this week, the handsome spikes of this plant were conspicuous. We have no hardy perennial to compare with it. As a cut flower it is very fine, but in the open garden in a group it is the finest of all hardy plants at the present time. Happily, too, it belongs to a group of the very hardiest of garden flowers, a fact that must assist in rendering so valuable a plant doubly welcome. The blossoms are freely borne on stout stems, each head containing eight or ten of its buds to open in succession. Messrs. Wallace had a fine bowl of this with a dozen giant flowers expanded, the Messrs. Barr also exhibiting cut blooms.

**Severe hailstorms.**—On Thursday, June 24, hailstorms of terrible violence occurred throughout Essex, Middlesex and parts of Hertfordshire, doing severe damage to glasshouses on over sixty nurseries at Chelmsford and district, Ponder's End, Enfield, Enfield Highway, Waltham Cross and Harrow. Twenty-one-ounce glass of all sizes was completely riddled and considerable damage was done to the Grapes, Cucumbers, Tomatoes and all kinds of plants and Ferns. We are glad to hear that thirty nurserymen who suffered loss were insured with the Nurserymen, Market Gardeners' and General Hailstorm Insurance Corporation, of 2, King Street, Covent Garden, who immediately assessed the damage done and paid the claims six days after. One nurseryman lost 70,884 square feet of 21-ounce glass, and his claim at 3d. per square foot amounted to £886 1s.

**Campanula pulla.**—This, now fully in flower, is among the neatest as also the most free flowering of the dwarf Hairbells. The plant is a native of the mountain pastures of the Austrian Alps, and doubtless one of the best of summer alpine. In some districts, I believe, difficulty is experienced in its cultivation, but it usually grows and flowers freely in most gardens if let alone. Though among the very dwarf kinds that, as a rule, submit to almost annual transplanting and division, this one at least in this respect must be excepted. It appreciates a rich, light, free soil, and a fairly moist position when growing, and if not kept to the rock garden its whereabouts should be well marked, as scarcely any evidence of the plant is left during winter. In the border it is often lost in winter by the somewhat dangerous practice to such things of mulching and the subsequent "pricking over" with the fork.—E. J.

**Phyteuma comosum.**—Of truly summer alpine, this is still among such as are too rarely seen, and, indeed, when met with only in solitary plants usually. So interesting a plant flowering in midsummer is worth greater attention. The rather long tubular corolla, much inflated at the base, are seen in clusters of a dozen or so on very short foot-stalks, that give the appearance of nestling in the coarsely-toothed leaves of the plant, the whole not more than 4 inches or 6 inches high. The species is best suited for the rock garden in crevices, where its roots may descend into rich loam 1 foot or more in depth. It frequently succeeds when wedged between a pair of stones, the only care being to keep the plants free of slugs during winter and early spring, when the fresh young Holly-like leaves appear. The plant may be increased by division when large enough, though its very slow growth does not often permit this. Early spring is the best time for this work, potting the plants firmly in grit and loam. Whenever fresh seeds can be obtained, these should be sown at once, preferably on cocoanut fibre or Sphagnum Moss in pans, scattering the seed on the surface and always supplying moisture from below.

**Lychnis Haageana.**—It is unfortunate that this plant is not happy in all soils, and in particular is this true of very cold and heavy clay soils. Generally in light and warmer soils the plant is more easily managed, provided the small slugs

will let it alone. These pests appear to eat the crown eyes or buds away in winter, and where the plants are small there is little hope of ever seeing such again. Some years since I quite accidentally obtained a piece of valuable information regarding the likes of this plant, by planting a tuft in a very dry and hot position in a small garden. The position was nearly due south, and being immediately in front of the bay window of a small villa, and close to the wall, the soil was usually very dry and hot. Yet, notwithstanding, this plant in two seasons developed into one of the finest single specimens I have seen, the stems about 2½ feet high, bearing large heads of brilliant scarlet-crimson flowers. From seed, so large a number of fine colours may be obtained, and so strikingly brilliant are they in midsummer that the plant is worth some extra care. In those gardens where the plant succeeds with ordinary care much may be made of it by grouping it as freely as circumstances permit. The plant is just now in full beauty, and contains many striking shades of orange, scarlet, vermilion, crimson and white.—J.

**Diplacus tomentosus and Gazania hybrida latifolia.**—These both came to me from the well-known French garden of M. Victor Lemoine, of Nancy, and being now in full bloom with me must, I think, both be considered as decided acquisitions, the former to the cool greenhouse or conservatory, the second to our summer outdoor garden. The *Diplacus* comes from California and seems to be a very free-flowering variety, the pretty pale yellow blooms, which are of good size, being produced in pairs at the axils of the leaves on the tops of all the shoots. M. Lemoine describes the colour as Naples-yellow, but I should call it light canary, with two spots of golden yellow at the throat of the flower, and bright yellow stamens. Another new *Diplacus* also sent me from Nancy a year or two ago under the name of *D. grandiflorus* has larger flowers of a paler shade, and is also well worth growing. With the old *D. glutinosus*, commonly known as the shrubby Mimulus, and the deep carmine-coloured *D. puniceus*, figured in vol. 65 of the *Botanical Magazine*, on plate 3655, these two new forms would be ornamental additions to any greenhouse. The new *Gazania* is a beautiful hybrid raised by M. Lemoine by crossing *G. nivea*, the comparatively new white-flowered variety from Natal (so well figured in THE GARDEN for April 27, 1895, on plate 1011), with the larger-flowered yellow species so well known in our gardens under the name of *G. splendens*. The new hybrid has fine large pure white flowers, with a violet band on the under petal and a bright yellow centre.—W. E. GUMBLETON.

**Welbeck Abbey.**—The Duke of Portland has appointed Mr. J. Roberts—formerly gardener to the late Baron L. de Rothschild, Gunnersbury Park—head gardener at Welbeck, as Mr. Horton is retiring.

**Names of plants.**—*J. C. L.*—1, *Astragalus narbonensis*; 2, *Orchis foliosa maculata*.—*S. H. B.*—1, *Lilium chalcidonicum*; 2, poor form of *Lilium creceum*.—*Miss Palmer.*—Your Lilies are affected with the disease which has proved so disastrous of late years to the Madonna Lily, and for which no remedy has yet been found.—*Constant Subscriber.*—1, *Asplenium viviparum*; 2, *Stachys lanata*; 3, *Dactylis glomerata variegata*; 4, too shrivelled to identify; 5, *Ophiopogon Jaburan variegatum*; 6, *Pteris longifolia*; 8, send better specimen; 9 and 10, send fertile fronds; 11, *Santolira incana*; 12, *Enonymus japonicus aureo-marginatus*; 12, *Kleinia repens*. We can only undertake to name four specimens in any one week.—*C. B. B.*—The Golden Drop (*Onosma tauricum*).—*B.*—*Scilla peruviana*.—*L. T. Davis.*—*Coronilla iberica*.—*C. L.*—1, *Saxifraga Cotyledon*; 2, *Cotyledon umbilicus*; 3, *Wood Sanicle (Sanicula europæa)*.—*R. Lake.*—*Thymus alba*.—*C. Edwards.*—1, *Limnanthes Douglasi*; 2, *Spiraea aruncus*; 3, *Althæa Liliago*; 4, *Alstromeria aurea*; 5, *Funkia ovata*; 6, send better specimen.—*J. Bennet.*—a, yellow, *Pblemis frutescens*; b, blue, *Salvia pratensis*.—*Syringhill.*—Specimens too shrivelled to identify.

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## ORCHARD AND FRUIT GARDEN.

### SUMMER PRUNING.

I CONSIDER summer pruning to be of the highest importance in fruit-tree culture if carried out in an intelligent manner. It would be well, perhaps, to compare the present condition of the trees with that of the same period last year. Last season, as we all have good reason to remember, was one of heat and drought, and the trees made early, but medium growth, which became fully developed, and the trees were ready for their summer pruning by the middle of June. The subsequent growth made was of little importance, which plainly showed what an effect the heat, drought, and the crops of fruit they carried had on the trees by restraining them from making any further, or, at the most, but weakly growth, and there was no stopping back to do at the latter end of August. This year, owing to the depredations of caterpillars and grubs, combined with cold weather, the trees were a much longer time than usual in starting into growth, and it looked at one time as if the insects were about to gain the upper hand. With the advent of warmer weather and the subsequent heavy and welcome rains which penetrated to the sub-soil, they soon made up for lost time, and are now pictures of health and cleanliness. Growth is very much more luxuriant than last year, in fact, more so than for many years past. The trees are not carrying such crops of fruit as they did last year, although many are heavily laden. This fact and the thorough moistening which the ground has received, have enabled them to grow away freely, and the wood has only now become sufficiently firm at the base to allow of summer pruning being performed in the case of Apples and Pears in the open quarters. To have pruned earlier would have had an injurious effect on the base buds of the young wood, as the latter being then in a soft, succulent condition, the majority would have broken and have produced a perfect forest of

growths. By exercising patience and waiting until the wood has become firm, the base buds will remain dormant and the two topmost ones only will grow out, thus ensuring the eventual production of fruit buds below or at the base, which is really one of the main reasons for performing summer pruning.

The other chief point to be gained in pruning or stopping these summer shoots is to allow sunlight and air to penetrate to all parts of the tree, which besides proving of immense benefit in increasing the size of each individual fruit, also tends to ensure a more perfect maturation of fruit buds. Each branch, when the pruning is completed, should present the appearance of a cordon tree, and if the branches are situated at good distances apart, light and air will have free play and exercise a good effect on both crops and trees.

Summer pruning is a simple operation, and consists in stopping or cutting back all growths issuing from spurs situated on the main branches to from four to five buds. The young shoot or leader growing out at the extreme end of each branch should be left any length ranging from 7 inches to 8 inches to two-thirds, according to the age and size of the trees and whether there is room or not for further extension. The leaders proper, or the central shoots on pyramidal trained trees should be merely tipped if young, and enough young shoots left to form main branches. These remarks are applicable to garden trees only, and the operation may be performed on Apple, Pear, Plum and sweet Cherry trees, and also on young orchard trees which are but as yet improperly formed.

Orchard trees, I am sorry to say, are now only commencing to recover from the caterpillar attack, and in some cases this has been so bad that it resulted in only too many instances in almost total defoliation. It will, as a matter of course, take the remainder of the season for these trees to recover, and the same may be said of garden trees where spraying has been neglected. These, and also trees which were lifted last autumn, as well as those in a weak

condition, should be exempted from summer pruning, as growth in all these cases is not likely to become at all gross. Allowing these trees to grow away unchecked will lead to increased activity at the roots, and this in turn will result in their becoming the more quickly re-established. A. W.

**Pear Olivier de Serres.**—"Midland Grower" does well in drawing attention to the merits of this excellent late keeping Pear, which I place next to Bergamote Espere in point of flavour and general good qualities. I find it is a better grower on the Pear stock than on the Quince, but on the latter it is far more prolific, and, like many other Pears which make but medium growth, it would if left alone soon crop itself to death. It is a Pear that will do with almost any amount of high feeding either in the shape of liquid or artificial manure, and will then produce very large fruits, which, as "Midland Grower" remarks, are very russety in appearance, and of first-rate flavour.—A. W.

**Fig White Marseilles.**—In answer to "J. C.'s" query, this Fig succeeds remarkably well grown in heat, and produces heavy crops of luscious fruit. It is a variety which requires severe entailment at the roots, as it is inclined to cast the first crop if allowed too much liberty in this respect. I had a large tree at one time planted in a brick pit which behaved in this way, but after root-pruning it and reducing the amount of rooting space quite two-thirds it gave no further trouble. I have since then done away with the tree and planted one of Negro Largo in its place, owing to the fruits of the latter being preferred. As a pot tree for early work it is first-rate, the pot furnishing the necessary entailment to the roots, and very large fruits are as a rule produced on trees grown in this way.—A. W.

**Strawberries as biennials.**—In very few gardens does the system of treating Strawberry plants as biennials prevail. Now is the time for any who have not so practised to put it to the test. Strawberry plants are making plenty of runners, and the plan may well be tried with Royal Sovereign, Auguste Nicaise, Noble or other early varieties. Mr. Herrin at Dropmore uses

every year a warm south border for the purpose, planting one half with Strawberry runners of the stoutest that can be obtained, 12 inches apart each way, and sowing the other half of the border with early Peas. Thus the crops are alternated yearly. Early varieties of Strawberries being planted, they fruit early, and may be cleared off quickly, some other crop, such as Coleworts, following, these being cleared off in time for sowing Peas in January. The produce of plants so obtained is always remarkably fine and abundant.—A. D.

**Black Currants.**—Both because of the general abundant rains and the absence of a fruit crop, the present season offers special inducement for the making of strong sucker growths, by which means these Currants when they become old are rejuvenated. It is well, therefore, in the case of old bushes to use the knife rather liberally in clearing out old and generally useless wood, and thus not only encourage strong root shoots to develop, but also to enable them to thoroughly mature. Whilst top trees are so much in danger of making too luxuriant wood growth, that trouble rarely affects bushes unless made very late and failing to mature. Some good may be done by gently stirring the soil about the roots with a fork, and then giving a moderate mulching of manure, so as to help retain moisture in the soil. Good wood growths now being made have till the end of September to ripen. Some such attention now may lead to the production of heavy and fine crops of Currants next year.—D.

**Apple Fearn's Pippin.**—I am glad to see a note about this Apple, and quite agree with all that Mr. Crawford has to say in its favour. I have two large bushes of it, and find it a free grower as well as an excellent cropper. Mr. Crawford does not recommend it for orchard culture, as too much time is required before the trees arrive at a profitable size. This is a good example of the influence of soils on fruit trees, as I know of a tree not far from here which grew away quickly, soon became established, and bore one of the heaviest crops of this Apple that I have ever seen anywhere. I have also been told that it succeeds well as a standard in some parts of Surrey. With me the fruits grow to a large size, and are, generally speaking, most brilliantly coloured, and the flavour is also very good. Mr. Crawford has done good service in calling attention to the fact that the fruits keep well if not gathered too soon, as I know of no other Apple more susceptible to shrivelling if gathered too early than this one.—A. W.

**Early Melons and canker.**—At p. 422 Mr. J. Crawford gives some most useful information on early Melons, especially regarding the unwise practice of not providing sufficient heating accommodation to structures for early crops. Mr. Crawford alludes to canker in early crops, attributing this sometimes to the use of water insufficiently warm. This may be so. This disease more frequently arises from other causes than using water insufficiently heated. Undoubtedly it is caused by injudicious treatment, such as allowing the plants to make a large amount of leafage and get crowded, and then cutting in the growth too severely at one time. Growing them in too close and stuffy an atmosphere will also cause it. For years I have considered keeping the collars dry an important item in Melon culture, but I never had this lesson so strongly brought to my notice as when looking over Mr. May's market nursery at the end of May. Melons were planted on a bed of soil in the centre of the house and on the sides of the two paths, from 2 feet to 3 feet apart, and trained up stakes from 4 feet to 6 feet high. When these were planted they were turned out of 5-inch pots; the balls stood on the soil, with a small casing of loam put round each. This had raised them several inches above the body of soil. When first planted they were kept moist till rooted into the lower soil. I noticed the balls had shrunk away from the soil round them. Nothing could be more satisfactory, as no canker or disease could be seen. At the time of my visit (end of May) he had begun cut-

ting. From two to three fruits to a plant were taken. No doubt the large airy houses and the high planting had much to do with this fine crop.—J. CROOK.

**Strawberries shrivelling.**—Can you tell me, from an inspection of the enclosed Strawberries, what is ruining the whole crop of fruit, and what should be done either now or to prevent a recurrence of the disaster?—F. G.

\*\* Unfortunately, you give us no idea as to the soil and treatment. The shrivelling of the fruit may have been caused by drought, by insect attacks at the root, by late planting and other causes, such as watering the plants overhead with strong sewage. From the fruits sent there appears to have been proper development, and the shrivelling is caused by some agency we have no knowledge of. Had it been excessive drought, all the fruits would not have gone; a few would have finished, though small. It may be wireworm which has devoured the roots, and, of course, the plants have collapsed. If it is so—and without roots we are unable to judge—you will need to make your land proof against this pest, and you are powerless now. The work of preparation should be done before planting. We advise a free use of gaslime and thorough exposure of soil before planting. Old garden land is more liable to attacks than others; on the other hand, recently turned-up soil, such as grass land, teems with the pest, and you will need patience to get rid of it. If you will kindly send us a few more particulars we may be the better able to help you.—ED.

#### STRAWBERRIES AND WIREWORM.

In light soils wireworm is one of the worst pests the Strawberry grower has to contend with. In my soil—one not at all adapted for the fruit—it is necessary to guard against this pest. I find the best remedy is to grow the plants one season and to change the crop the next. Some time before Strawberries were recommended to be grown as annuals I adopted this plan to get a healthy plant, and seeing what good returns such plants gave when planted early, I have devoted more space to these fruits and been less troubled with wireworm in the soil. Last season I saw some acres of plants which had been planted in land recently an old turf pasture. Heavy crops were expected in the maiden soil, but the old turf which had been turned in was a perfect nest of wireworm. The plants died off wholesale. This shows one cannot altogether rely upon new quarters unless some means are taken to rid the land of the pest. I have tried various means to effect a clearance, and find gaslime the best; and as in many places it may be procured for the carting, it is of great value to the fruit and vegetable grower. Most persons plant their Strawberries in the late summer, and where grown as yearlings the earlier the better, so as to give a long season of growth. To get the soil into condition, it is necessary to dress the land a little time before planting. In my case Strawberries follow a green crop or early Potatoes, and the land is allowed to rest as long as possible; indeed, a much longer rest would be beneficial if it could be given. The lime is placed on the surface and the lumps broken finely. This exposure pulverises the lime, and when dug in it is well mixed with the soil. Mine is a shallow soil. I am unable to turn the top spit to bottom, as the lower one rests on gravel in many parts of the garden. I have never seen any injury from gaslime used thus; in fact, when ground has been occupied I have lined just before planting, but in this case the roots must not rest on the fresh lime, and deeper digging is needed. I have seen evil results when a load of lime has been placed in

heaps and not evenly distributed over the surface when digging. Ground treated thus will be free of wireworm for two years or more, and the land will be in excellent condition for Brassicas after the Strawberries are over. There will be an absence of clubbing, so troublesome in old garden soils, and in many cases I feel sure gaslime or even common lime would be more beneficial than annual doses of manure. The best time to apply gaslime is in the late autumn or during the winter, but in many gardens one is obliged to crop the land when cleared, and Strawberries planted in the spring, which is an excellent practice if the runners are small, or taken from plants which have fruited, wintering the plants in rows and not allowing them to fruit the first season after planting, give a splendid crop the next year, and the ground can be done thoroughly at the same time, giving a rest during the winter. With winter or autumn dressings more lime may be used, and for a crop that is to stand for two or three years, it is best to specially prepare the ground during the winter in the way advised. By planting a quarter every year one can always rely upon fruits of good quality and in quantity. G. WYTHES.

#### PEACH STONES SPLITTING.

World you kindly tell me the cause of the stones of Peaches splitting?—CONSTANT SUBSCRIBER.

—Will you kindly give the reason of my Peaches cracking just before ripening? I enclose one as a sample. The roots are partly inside and allowed to go outside, and the fruits appear healthy until at the stage of the one enclosed. It is an old tree, and carrying a good crop.—J. J.

\*\* Some few varieties are addicted to this, in others it occurs casually. The worst offender in this respect is Early Rivers, and it is solely due to the fault of stone splitting that this fine variety is going, or has nearly gone out of cultivation. With me Grosse Mignonne has frequently developed a similar weakness, but nothing like so badly as Early Rivers. Although all the fruits with split stones do not ripen or drop off prematurely, it detracts considerably from their value, and ought to be prevented accordingly. Neither of the correspondents who complain of "stone decay" and splitting state whether or not they have had the same difficulty to contend with in previous seasons, and only one, "J. J.," mentions anything about the age of the trees affected. The largest fruit sent resembles a highly-coloured, perfectly ripened example of Grosse Mignonne, and not till it was handled could anything wrong be detected. There is no remedy for stone splitting as far as this crop is concerned—at least not when the fruits are as forward as those sent, and I have my doubts about its prevention in the case of later crops. Imperfect fertilisation of the flowers, over-rich borders, and an excessively moist and close atmosphere are given as either causes, or accelerating influences, of this malady, but none of these errors in culture could have been laid to my charge either in this or previous seasons, and yet I have had a few fruits with cracked stones each summer. No notice is taken of a few fruits going wrong, but if much splitting of stones took place on any trees other than of Early Rivers, then remedial measures would be quickly adopted.

If, therefore, the cases under notice are what may be termed bad ones, then I would advise correcting what outward influences are at work in the borders. Early in the autumn, or while yet the leaves are green and cling tightly to the wood, partial lifting of the roots should take place. Commence by opening a wide, deep trench 4 feet or so from the stems, and then gradually and carefully undermine and bare the roots to within 2 feet of the stems. If they are found planted too deeply, and many trees sink considerably after planting, the collars, or point of union

f topmost roots with the stems, being several inches below, instead of slightly above the level of the border, wholly lift and replant higher. In either case well undermine the reserved ball of soil, so as to be able to shorten any deep running roots there may be. The preserved roots—after having been overhauled and pruned, cutting away all broken ends and damaged portions—should be quickly relaid in fresh compost. It is here where would-be renovators must use their own discretion. If the soil was previously too light and poor, correct this fault by mixing loam of a more clayey nature with the ordinary loamy soil of the district, with a view to making it stronger and more retentive than formerly. Also, if the growth of the trees hitherto has not been quite so free as desirable, mix a little half-rotten farmyard manure and a sprinkling of bonemeal with the loam. Where, however, the soil of the border is naturally heavy and retentive—too much so, in fact—this may be remedied by the addition of sand, mortar rubbish and burnbake (soft ballast) in sufficient quantities to keep it more open and porous. The roots should be kept moist while exposed, and carefully spread out in the new compost as this is somewhat firmly added to the trench, keeping them up nearer the surface than formerly. Those who are afraid to adopt such drastic measures may meet the case by doing one side of the tree this season and the other half of the border next year. Personally, I should not hesitate about wholly lifting quite large trees in the autumn, but then the work would be done well and at the right time. When the roots have access to both inside and outside borders, one border may be renewed this season and the other next year. This process of lifting the roots and relaying in fresh compost is desirable in many cases, even if there is no trouble with the fruit, as it serves to sustain the trees in a healthy, free-bearing condition. The most successful growers practise it and are well compensated for their pains.

In the autumn, before the leaves have ceased to perform their functions, is, as was previously noted, the best time to partially or wholly lift Peach and Nectarine trees, for the very sufficient reason that root action is, or ought to be, most brisk then, and the pruned roots have time to heal and form numerous fibres before the resting period arrives. The next best time to do this important work is when the trees are bursting into growth in the spring. If the roots are much interfered with in the autumn, the leaves may flag badly for a few days, but this can be largely prevented by giving water liberally to the roots in the old soil, by affording temporary shade, by keeping the house close for about ten days, and frequently and freely syringing the trees overhead, not allowing the leaves to become really dry on sunny days. Trees treated in this way, and kept well supplied with water at the roots the following season, will usually produce full crops of excellent fruit, little or no splitting of stones being apparent.—W. I.

**Cherry Black Tartarian.**—This noble, highly-flavoured Cherry is generally described in fruit catalogues as of tender constitution, and while it will not stand orchard exposure in any but the warmest climates, it thrives on walls in the midland counties better than many of the so-called hardier varieties. Another good trait in its character is that it hangs for several weeks in good condition if protected from flies and wasps. This Cherry is also known by the name of Black Circassian. The fruit on healthy trees grows to a large size.—C. C. H.

**Cherry Florence.**—This is a large handsome variety and well worthy of a good position on a wall, but it requires a good climate to induce it to yield well. Like many of the best dessert Cherries, it does very indifferently in the Midlands, although I have a tree on a wall which now and then has a fair sprinkling of luscious fruit. It belongs to the late section, and will hang for a long time if protected from birds. It should not have a rich larder, being inclined to make very

strong growth, which does not ripen properly, gumming following. To show how climate affects Cherries as well as other fruits, I may state that Florence—which in Kent is known under the name of Wellington—is grown extensively in that county for market in standard form, the large red and yellow fruit realising high prices.—J. C.

**Beetles eating Strawberries.**—I have forwarded to you some beetles which are doing great damage to the Strawberry crop. They bury themselves in the soil during the day and come out and feed on the fruit at night. I have found as many as a dozen round one Strawberry plant, some of them 4 inches deep in the soil. I should be glad if you could give me some hint as to getting clear of them.—W. M.

\* \* \* Your Strawberries are, as you think, attacked by one of the Carabide, or ground beetles (*Harpalus ruficornis*). These beetles are, as a rule, carnivorous, and are of much use in gardens, as they and their grubs destroy other grubs and small insects, but when the Strawberry season comes round they seem to leave their natural food and live on Strawberries. It is no easy matter to destroy them; they are so smooth, hard, and active that I do not think any insecticide could be made to harm them. Raising the fruit from the ground on wire supports would probably prevent the beetles from reaching them. No straw, lawn mowings, or anything that could afford the insects any shelter should be placed near the plants. Pieces of raw meat laid about will attract large numbers of them, and a piece of coarse sacking should be laid over the meat so as to afford the beetles a shelter.—G. S. S.

## FLOWER GARDEN.

### LATHYRUS PUBESCENS.

The perennial Peas are favourites with almost every one, and either as cut flowers or for decoration are of the greatest value. Clambering over a hedge, a trellis or a rustic fence, the old-fashioned, yet ever admired, *Lathyrus latifolius* in its several shades of colour is pleasing to all, while *L. grandiflorus*, which has, perhaps, the finest single blooms of the species in cultivation, is equally charming. While these and other species less known can be had to give colour and beauty, it may seem strange that a new "Everlasting" Pea is sought after by lovers of hardy flowers. Yet this is the case, and the publication of the descriptions of some new Californian *Lathyrus* a few years ago led to a desire to add these and others to collections of hardy flowers. Some two or three of these Californian species still survive here, but one fears that their usefulness in our climate is but small. They may still flower, but though June is now fast drawing to a close, the prospect of their blooming this year seems very small. Not so, however, with the Uruguayan species, *L. pubescens*, which came into bloom here early in the month, and which one would fain hope may prove hardy in this garden by the Solway-side. Last winter was not the most severe on record, but it was among the wettest seasons we have had for long. It was thus particularly trying to plants from drier climates, and as the late spring frosts, so destructive to many flowers, did not harm this Pea, one is hopeful that in mild districts it may prove hardy enough on a wall or sheltered fence. It is distinct enough in its way to make it welcome to the many who take a pleasure in these flowers. The colour is a pleasant variety in itself. It is a bright, yet soft lavender, deeper on the standards than on the keel. It might, with a little play of fancy, serve for "Lord Anson's Blue Pea," which so many of us have tried in vain to obtain. The flowers are in neat racemes, which vary considerably in the number of blooms they produce, some showing only

five, but many nine flowers, and a few eleven. The individual blooms are comparatively small when compared with those of *L. latifolius*. The leaves and other parts of the plant are quite pubescent, so that no one can question the appropriateness of the specific name. I regret, however, that I am not aware to whom the name is due. The plant itself appears to be of a semi-shrubby nature, as the young growths on my plant were produced from the old stems which did not die down to the base. It is of a climbing habit, attaching itself readily by its tendrils to suitable supports. It has only attained a height of some 4 feet or so this season, but when it becomes better established will probably exceed this. The plant I have was very kindly given me by Mr. W. E. Cumbleton, of Belgrove, Queens-town, who raised it from seed sent him from Uruguay, but who unfortunately has not been able to preserve his plants. The native country of *L. pubescens* is apt to make one strongly sceptical of its hardiness, so in planting it out in the spring of 1896 it was placed against a trellis on the gable of an out-house with a south-west exposure. The narrow border in which it grows is a dry one, and, while this may have checked its growth, may also have contributed to the well-being of the plant in winter. It is as yet too soon to tell if this Pea will produce and ripen seed in our climate. Its distinct colouring and appearance make it not improbable that hybridisers might turn it to good account in helping to give to the perennial Peas the wide range of colour shown in the exquisite Sweet Peas so deservedly popular at the present time. S. ARNOTT.

*Cursethorn, by Dumfries, N.B.*

### NOTES ON HARDY PLANTS.

**Saponaria Boissieri.**—"Charming" is the word often applied to a well-established plant now in flower. It has some resemblance to *ocymoides* in the best forms of that well-known kind. The flowers are bigger, but the chief feature is the true, clear rose colour of the flowers, which have also a sheeny effect.

**Melittis melissophyllum.**—There are two distinct varieties of this without, so far as I know, a varietal name to distinguish them by. By this post I send a flowering stem of each. Both are beautiful when well grown and flowered, and are fit for borders where a long succession of bloom is wished for.

**Delphinium trolliifolium.**—Much the earliest of Larkspurs, this has besides a lofty and conspicuous habit. The flowers are large and of a deep blue shade, though lax on the spike. The point of this note, however, is to direct attention to an effective plant when employed in semi-shade and backed by shrubs, as suggested by a group of plants between some tall green Hollies with a west aspect. Nothing could be richer and more beautiful even without the aid of any other flowers.

**Saxifraga balcana.**—Here we have quite a new and pleasing departure. It belongs to the Aizoon section; it is also encrusted or silvery, features common enough, but not of the flowers, which are heavily and evenly spotted with red, so much so, that at a short distance the panicles of bloom have the effect of being pink. No other Saxifrage of its section in any way compares with it, except, perhaps, in a measure *Macnabiana*. Even this comparison conveys but an indifferent idea of what this dwarf kind is like. For its perfume alone it is well worth a place among the choicest alpine, and its slowness of growth, but withal sturdy habit, fits it for association with rare and slow-growing kinds.

**Dianthus Michael Foster.**—Seen in dry weather this is truly a fine single Pink—a hybrid

alpine species of the neglectus type. It is free, vigorous, effective, and not liable to disease.

**Eryngium glaciale.**—No more charming alpine plant could be mentioned for the present month. The stature is 3 inches, the whole plant silvery with exquisite green shading. All its features are on the pigmy scale, the bracts, however, large for so small a plant, supporting a dense cluster of pale blue flowers; stems, leaves, and bracts are all rigid and spiny. Though small, the plant is full of character, and capable of enlisting more than ordinary interest. Rotten stone and sand form its chief rooting medium, and as it has done so well it is reasonable to assume that at least this mode of culture will do for it.

**Edraianthus Kitaibeli.**—This distinct kind is most remarkable for its fine erect, almost tubular flowers of a rich purple (even for an *Edraianthus*) and the large bronzy red, star-like calyces. The general description of the plant may be said to place it near or between *E. dalmaticus* and *E. serpyllifolius*, and yet it is markedly distinct from either.

**Aciphylla squarrosa.**—A five-year-old specimen which flowered freely last summer is making a beautiful head of its singular foliage now. It is not always the case that old plants do so, but often die. I merely mention this fact to show that neither rule is absolute, as was thought not long ago.

**Incarvillea Delavayi.**—A few plants of this glorious new species grouped together and now in flower are very striking, and have been referred to several times in these columns. The practical point I would like to refer to is that I put half a dozen strong plants under hardy conditions and—at least so far as the winter of 1896-7 applies—all the plants came through scathless.

Woodville, Kirkstall.

J. WOOD.

#### LILIUM ELEGANS.

This Lily is a native of Japan. In Holland, too, it is largely grown, and in this country it succeeds as a border Lily better than many other species. All the forms of this Lily, and indeed nearly all the different species belonging to the upright-flowered, cup-shaped section, can be depended upon to bloom well the first season after planting, which is more than can be said of all Lilies. The different forms of this species are seen to the best advantage when planted in groups in the open border, though by some they are employed for flowering in pots. In this latter case several bulbs should be put into one pot, as in this way they form neat little masses of flower. In purchasing bulbs of any of the numerous varieties of *L. elegans*, it should be borne in mind that they are a good deal smaller than those of most species of *Lilium*. Their nearest relatives—*L. croceum* and *L. umbellatum* or *davuricum*—have bulbs a good deal larger than those of *L. elegans*. The differences that exist among the numerous varieties are not limited to the colour of the blossoms, but there is also a good deal of variation in height and in season of blooming. The dwarfiest of all are the little buff-coloured *alutaceum* met with occasionally under other names, that of aureum being often used, and *Prince of Orange*, much in the same way, but with rather more pointed leaves and somewhat deeper-coloured flowers than those of *alutaceum*. The two kinds are less than a foot in height, while the pretty and distinct *pictum* is but little more. This last (*pictum*) has widely expanded blooms of a rich yellow, splashed and flaked with red. One of the earliest of all is *marmoratum aureum* or *robustum*, whose bright reddish orange-coloured flowers are freely spotted with brown. This is also one of the tallest of the group, as it reaches a height of 2 feet or so, while another of about the same stature is *brevifolium*, with very short, exceedingly dark green leaves and flowers of a distinct reddish salmon colour without any spots. Bright coloured forms are numerous, and their nomenclature is by no means uniform, so that one may often get the same variety under two or more names. A

very richly coloured flower which I have had from Holland as *Van Houttei*, and from Japan as *fulgens*, is the best of the rich crimsons, but distinct from all are the extreme blackish blood-red flowers of *Horsmani*, known also as *haematochrom*. One of the varieties grown in considerable numbers by the Dutch is *lateritium* or *biligulatum*, whose bulbs are larger than those of most forms of *L. elegans*. The flowers of this are a kind of brownish red tint, bright and pretty when at their best, but they quickly lose their freshness and become dull; indeed, the flowers of this variety and the showy *pictum* are over in less time than those of any of the others. There is a double-flowered form of this Lily which is not nearly so pretty as the single kinds, unless in the eyes of the few who regard single blossoms of all kinds as inferior to the double ones. The doubling of this Lily is caused by the centre being partially filled with enlarged petaloid segments, thus differing altogether from the double *Tiger Lily*, in which the petals are numerous and overlap each other, forming in this way a double blossom. T.

#### PRIMULA TRAILLI.

As one of the members of the floral committee of the Royal Horticultural Society who took exception to the plant exhibited by Mr. Geo. F. Wilson on April 27 being regarded as a distinct species until fuller information was forthcoming, I may be allowed to state that there does not appear to be in the herbarium at Kew any specimen of *P. Trailli* to which it can be referred for identification, and *P. Trailli* does not find a place among the species given by Mr. George Nicholson in his "Dictionary of Gardening." It is a curious fact that one of the reasons put forward by Mr. H. Selve-Leonard for accepting it as distinct from *P. involucreta* was the fact that it had drooping flowers. Now I learn from Mr. G. F. Wilson's communication on p. 465 that this characteristic was owing to dryness at the roots of the plant and the heat of the room. At the subsequent meeting of the committee I produced a flowering plant of *P. involucreta*, with which I hold the *P. Trailli* to be identical. To show the similarity of the two, and on the strength of this, the committee came to the conclusion that it was desirable *P. Trailli* be referred to Kew for identification. It was pointed out that Mr. Wilson's specimen was much larger in all its parts than that of *P. involucreta* I produced, but that was readily enough explained, as Mr. Wilson's plant was simply a single individual which had been well cared for, while mine was an aggregation of individuals—a portion of a clump growing on rockwork in the open air. I think I am correct in stating that the so-called *P. Muuroi*, which is but a variety of *P. involucreta* and probably not markedly distinct from the type, was obtained from seed sent home by Captain Munro from the Himalayas some half a century ago, and now we have *P. Trailli* originating in the same way. I think, therefore, there is abundant reason to hesitate before Mr. Wilson's plant is accepted as a distinct species, and I regret that the committee were so precipitate in passing it as such. Mr. Nicholson was, unfortunately, absent when the award of merit was made to Mr. Wilson's plant; had he been present, the probabilities are the plant would then have been referred to Kew to certify as to its distinctness. What astonished me was the large number of votes cast for its recognition as a distinct species, and I wondered how many of those who so voted had ever seen *P. involucreta*. If *P. Trailli* as shown by Mr. Wilson can be established as a distinct species, I shall be delighted to be one of the first to congratulate him on his acquisition. *P. involucreta* promises to yield a pod of seed. Should it mature, I will carefully sow it and endeavour to furnish another proof of its identity, or otherwise, with *P. Trailli*. R. DEAN.

Eding, W.

**Digitalis lutea.**—This Foxglove is distinct in colour and growth, and is worth a place in the wild garden. Some three years ago seed of this was sown. I removed the plants to the wild garden, and since

then these have borne seed, and now early in June I have strong plants full of bloom.—DORSET.

**Tufted Pansy Mrs. H. Bellamy.**—A bed of this useful variety, containing some 500 or 600 plants of good size, was in fine condition at the Bolehall Pansy grounds recently. The plants were flowering freely, the individual blossoms being beautifully smooth and the colour also good. The upper petals are pale lavender, the lower ones being rich purple. Although the flowers of this variety are not so large as those of *Craig* or *Stophill Gem*—both of which resemble this variety in form and in colour—yet it is a matter for doubt whether these two sorts are as good for the flower garden as the one under notice. The habit of *Stophill Gem* appears to be a slight improvement upon this older variety.

**Tufted Pansy Magnificent.**—This is a seedling from the well-known tufted sort *Blue Gown*, and while it would perhaps be impossible to find a better habit than in the parent variety, and which is transmitted to the variety under notice, the flowers of this are larger, and, consequently, more effective. The blossoms are deeply veined in the centre, and the eye is perfectly free from rays. At the present time pieces which were propagated early in the spring are nice plants, each carrying quite a number of charming blossoms on footstalks of a useful length. Like many of the very compact and tufted sorts, this variety is rather later than many others in coming into flower.—C.

#### RAYLESS TUFTED PANSIES.

IN THE GARDEN of JUNE 12 some observations are recorded regarding a want of constitution in *Tufted Pansy Waterloo*. As the raiser of that flower, I was at one time of a similar opinion, but now, with a row of two-year-old plants, I have some reason to think otherwise. When we remember how seedling plants are treated in their infancy (pulled to pieces for propagation), no wonder that they are weaklings the first or second year of their growth. Let them be grown as perennials, allowed to remain for a year or two in one place, and it will be seen that they gain vigour for at least four years, and reward a little care in keeping the soil between the rows open and mulched in warm weather. A five-year-old row of *Blue Gown* treated in this fashion is at the present time as close as turf, and so smothered in flowers as to hide the foliage. *Waterloo* has rather more substance in the flower than *Blue Gown*, and the colour is also rather better, with a fine dwarf habit of growth; but no existing variety rivals *Blue Gown* in that respect. *Florizel* has come out in grand form this season from being allowed to remain where planted. When I parted with it as a seedling only one vigorous plant was in the bed, which was divided into two, and the gentleman who sent it out got one half, the produce of which seems to have flourished with him as everyone seems now to grow that variety. With these rayless forms a proper understanding should be arrived at as to what is wanted. Bedders and show varieties should be grown separately. Take *Border Witch*, for example, as a type for show in a spray. That flower is *Sylvia* crossed with a *Peacock Pansy*. Out of a large batch of seedlings, *Border Witch* was the only rayless flower in the whole lot. Some of the newest and most beautiful of the show varieties are its progeny, and these seedlings come wonderfully free from rays, but want more substance to stand heat. As bedders, *Cleg Kelly*, *Rosea pallida*, *Gold Crest*, *Waterloo*, *Blue Gown*, and *Bedding Rose*, all good and close to the ground, flower freely and will flourish in any dampish, partially shaded situation.

Hillside, Chirnside, N.B. CHARLES STUART.

## STREAMSIDE VEGETATION.

RUNNING water in the garden opens up an endless vista of possibilities in the grouping of flower and leafage along its verge; dwarf little creeping plants to fringe with lowly blossom the edges of the tinkling rill; tall spires of bloom and noble curve of leaf to border the statelier stream that moves sedately on its course; great Ferns to oversweep the trembling lip of the cascade ere its waters plunge in silver to the pool below. Sometimes, as in the accompanying illustration, the garden boundary is formed by running water; a mill-stream that waxes and wanes, is vocal or silent as the mill-wheel moves or rests. Here, on the farther bank, to which the rough rustic bridge gives access, Nature has been unrestricted, and has spread above the water a rampart of living green; facing this wild growth on the garden side, the bank above the flowering Grasses is crowned with an irregular line of white Michaelmas Daisies, holding in their widespread stars and in the un-

especially *I. pallida* and the variegated Water Flag, and lastly the beautiful *I. stylosa*, blooming at the coming of winter. *Libertia grandiflora* is another subject that flowers well by the water, and *Spiraeas* should be freely used, the tall *S. Lindleyana*, *S. ariaefolia* and *S. flagelliformis*, while of the herbaceous section there are *S. Aruncus*, *S. palmata*, *S. venusta*, *S. japonica*, and *S. filipendula*. Many of the Lilies do well in the neighbourhood of a stream, especially *L. pardalinum*, *L. canadense*, *L. superbum*, and *L. Humboldtii*, while herbaceous Phloxes, *Pyrethrum uliginosum*, Starworts, Day Lilies, Arundos, and Bamboos all have beauty of colour or of form to recommend them, and thrive best near water, and there the tall Campanulas hold their bells in perfection longer.—S. W. F.

The following has been sent us by Mr. W. G. Holland, Glan Alyn, Gresford, who kindly forwarded the photograph from which the illustration has been prepared:—

and finally giving the pit itself a thorough fumigation with sulphur. The new growth that the plants are making is likely to prove a deception, and I certainly would not trust to any such stock for a future supply. Marie Louise has been particularly subject to this disease in some parts of the United States, and many growers have been compelled to discard this lovely old variety in favour of Lady Hume Campbell, though the latter variety has not the same rich colour that is so much appreciated in a healthy and well-grown Marie Louise. Various fungicides have been tried by our Violet growers, and it has been claimed that Bordeaux mixture proves effective as a preventive, and even as a cure in light cases.—W. H. TAPLIN, *Philadelphia, Penn.*

**Silene Otites** (Spanish Catchfly).—There is quite a large colony of this plant growing on the top of the old walls of Colchester Castle, where the caretaker has his time almost occupied in preventing the visitors destroying it by picking every flower and so preventing it seeding. The plant is interesting in that it grows in company with one or two others, as Stonecrops and Wall-



Michaelmas Daisies and other plants by the side of a mill stream running through Glan Alyn Gardens, Gresford, N. Wales. From a photograph sent by Mr. W. G. Holland.

restrained freedom with which their further flower-sprays stretch athwart the stream, throwing their blossoms into strong relief against the dark background, a suggestion of unconventionality in keeping with the surroundings. Further back, looking over the white ranks of this advance guard of cultivation, stand in the tilled ground the tall Sunflowers. Only hardy flowers should be grouped by running water, and the grouping of these should be as far as possible natural, so that from earliest spring to the commencement of winter, where the contour of the banks admits, the streamside shall form a fair setting for fair flowers. Snowdrops, Scillas and Narcissi, Snowflakes and Stars of Bethlehem begin the year, followed by Irises, the Japanese *I. Kämpferi*, *I. sibirica*, the bulbous English and Spanish (*I. Xiphion* and *xiphoides*), the tall *I. orientalis* or *ochroleuca*, *I. aurea*, and *I. Monnieri*, all three similar in manner of growth and often attaining a height of nearly 6 feet, and very valuable in colonies by a streamside, the German Flags,

The illustration shows a border of white Michaelmas Daisies alongside the tail of the Gresford mill stream running through this garden. The plants have been undisturbed for some years. A rustic bridge crosses the stream at one end of the border; the other end is terminated by a summer-house built on a stone bridge over same.

**Failure of Marie Louise Violets.**—The experience of "J. R."—as related in THE GARDEN of May 1, page 310—is, unfortunately, not an uncommon one among American Violet growers, and similar failures have been the cause of great anxiety, and also severe pecuniary loss, to many growers during the past fifteen years. From the description given by "J. R.," it seems evident that his Violets have had a severe attack of Violet fungus, or, as it is generally known here, the Violet disease or spot. This disease is caused by minute fungi, most likely by *Puccinia* or *Cercospora*, and is extremely difficult to eradicate. My advice to "J. R." would be to burn every affected plant, both root and leaf, removing the soil from the pit in which the disease appeared,

flower, without an inch of soil in the crevices of the old masonry. The leaves are about 2 inches in length, the habit closely tufted, and the flower-spikes about 15 inches or 18 inches in height, bearing corymbs of greenish white blossoms. The sticky exudation common to the genus is very marked in the flower-spikes, and these appear to turn much darker with age. The Viper's Bugloss, too, is growing well and flowering in almost inaccessible parts of the walls.—R.

**Brompton Stocks.**—When "C. C. H." writes of Brompton Stocks that their great merit is their hardiness, he indicates something in them I have failed to find. Practically when growing these for several years always on the warmest and most sheltered positions I could find, I found them destroyed wholesale by frosts, and had as a last resource to put a number into pots and winter them in a greenhouse to save them. It need hardly be said that such plants seldom gave those fine spikes that strong plants unharmed outdoors would give. But even where plants did escape frost, the coll to which they were subjected seemed to have a deteriorating effect, as good double strains of both Giant White and Scarlet

presently became single, and under no conditions could they be induced to revert to the double form. How much I should like to secure seed of both these forms of a fine fairly double strain now. I look everywhere for them in gardens in vain. They seem to have quite disappeared. What are now seen appear to be the Giant Cape or Emperor Stocks, but the good old Bromptons are not. Some years since the beautiful branching Queen Stocks, scarlet, purple, and white, were grown in great quantities in the Middlesex orchards to furnish cut flowers, but these gradually became injured by frosts, dwindled away, and are now seldom seen. Yet these Stocks were amongst the most beautiful grown in gardens. Certainly the past two winters have been very merciful to biennial Stocks, but they are none the more plentiful. No doubt their culture has largely fallen into abeyance because of their comparative tenderness when severe weather prevails. Yet there can be no doubt but that few plants in gardens give more real pleasure when found in good form.—A. D.

#### DOUBLE POET'S NARCISSUS.

MR. E. JENKINS has done good service in again referring to the question of the failure of this to open in some gardens. It is one to which I have often directed some thought, from the fact that my experience with this exquisite flower in a poor and dry soil is quite contrary to that of many. When we find, however, that such authorities as Rev. G. H. Engleheart and others attribute the blindness of the buds to poverty and dryness of soil, one is apt to be rather diffident in the expression of one's views, founded though they are on some experience. The note by Mr. Jenkins, who has had so many opportunities of observing the behaviour of this double Narcissus, emboldens me, however, to give the result of my own experience with it here. When I bought this house some fourteen years ago there was a good-sized clump or two of the double Poet's Narcissus in the garden. These were growing among the roots of Gooseberry bushes in a very dry part of the garden, where about 2 feet from the surface pure sea sand underlay the soil. They had either been deeply planted originally or had been frequently covered with soil, as they were much deeper than I should care to plant them. They were also very close together, and this with the deep planting had caused them to elongate themselves until they had become quite shapeless-looking objects. I removed them after flowering that season, and in all these years I have never had a bud go blind. They have flowered regularly and satisfactorily, although several times disturbed to take off off-sets for planting in other parts of the garden. I am satisfied that dryness or poverty of soil at the flowering or any other time will not cause failure with this Narcissus in every garden, and that we must seek elsewhere for the cause. It must be mentioned that some of my clumps have had no manure in any form and are in poor and dry positions. What makes the matter more singular is that some of the single varieties flower in a less satisfactory manner than the double one. This year, for instance, a good clump of *N. poeticus recurvus* within 2 feet of one of the double Poet's Narcissus did not give me a single bloom, while the latter had a full yield of flowers. Quite close to both the small-flowered *N. poeticus*, called "*poeticus* of Linneus," flowered very freely. Why these things happen is a puzzle not easily solved.

One is glad to see the stress laid by Mr. Jenkins on early removal for the poeticus varieties. It is remarkable how soon they begin to make new roots, and if lifted after these begin to grow, it is almost impossible to avoid

injuring them to the detriment of the bulb itself. It is unfortunate that the purchase of *N. poeticus* is generally left until the bulbs of the other Narcissi are offered, and that, even if ordered early, it is not delivered before them. Personally, I would rather have *N. poeticus* removed when in flower than a fortnight after its leaves had begun to yellow. There would, I feel satisfied, be fewer losses to regret. A remark was made by Rev. G. H. Engleheart about bulbs collected in their native habitats. Unfortunately, I regret to say my losses with these make me agree with him. They seem more difficult to establish, and even their flowering the first season after planting is no guarantee that they will appear the next. Not all of us have the opportunity of searching their native habitats for exceptionally good flowers, and we are tempted to buy imported bulbs in hope of obtaining some varieties such as may be found among those from the Italian mountains. In the same connection Mr. Engleheart refers to some varieties found by our good friend Mr. James Allen. I have had the pleasure of growing six of these for a few years, but until this year have never had the satisfaction of seeing all in bloom together. They appear to be gradually overcoming their weakness, and have made stronger growth than before. They vary considerably in size, form, purity of colour, and time of flowering.

*Carsethorn, Dumfries, N.B.* S. ARNOTT.

#### TUFTED PANSIES AT TAMWORTH.

THE Tufted Pansies in Mr. William Sydenham's grounds at Tamworth are always worth seeing, and this year in particular. They are grown on a very extensive scale, over 1,000,000 plants having been ready for distribution early in the spring of the present year. By a very careful selection of varieties—many of the older and less meritorious sorts having been discarded—the collection now contains many exceedingly beautiful forms of this useful flower. One important rule observed here is the constant weeding out of sorts which do not come up to a proper standard of habit, so that those now catalogued are typical of what a Tufted Pansy should be. The newer varieties are mostly of compact, dwarf habit, or else possess that peculiar form of growth in which the shoots crawl over the soil, so that little is seen of that unwieldy and elongated growth which was often characteristic of many of the older sorts.

The grounds are situated on a slope with a western aspect and fully exposed, no shelter from the hot sun by trees being obtainable. Viewed from any point, the display of colour is a very remarkable one, and proves the value of the Tufted Pansy as an effective plant for massing in large beds and borders. The plants are arranged in a long series of beds, each about 4 feet wide, with paths arranged all round them. By these means the beds are easily examined and the plants kept in a healthy and vigorous condition. The kinds are arranged in alphabetical order, thus making it an easy matter for a visitor to find any one particular variety. The immense array of shallow frames and their accompanying lights tell their own tale of the wholesale way in which propagation is here carried out. This has already commenced with varieties where the demand is likely to be a large one, the plants being pulled to pieces repeatedly until many thousands are secured for autumn or spring planting, as the case may be. Most of the plants were flowering profusely, some varieties standing out distinctly as improvements on those already in commerce. Conspicuous among others was Lucy Franklin, with large, oval, rayless flowers of good substance and freely produced. The colour is creamy white, the bottom floret being a rich yellow. Councillor W. Waters is one of the best dark sorts, the colour being best described as bluish purple and quite distinct. This variety flowers freely and

the habit is excellent, while the constitution is all that is wanted. A variety of great promise and very striking is Devonshire Cream. This is oval in shape, rich cream in colour, with a clear orange centre. It is exceptionally free, the habit dwarf and compact. Another capital variety is M. D. Cheshire, the habit being beautifully dwarf and the plant free-flowering. The lower floret is yellow, the upper florets being a very pale shade of the same colour. A new kind named Britannia has flowers of quite a new shade of blue, and is best defined as rich metallic-blue. The blossoms stand out very prettily from a capital tufted growth, and are of good size, neat form, and with plenty of substance. Crème de la Crème is another pure cream self with a neat orange eye, while the habit is also good. Of rayless yellow varieties there were many of exceptional merit, and these should be in demand where varieties possessing good fixed colours are wanted. The premier position should be given to a seedling raised by Mr. Sydenham last year and named by him Pembroke. This variety has large, rich yellow flowers, the colouring on the lower floret being deeper and richer. The flowers are almost circular, the form good, and the flowering qualities excellent. The habit is fairly dwarf, and its constitution could not very well be better. Two or three large beds of this variety were the most conspicuous of the whole display. This variety is also fragrant. Another good rayless variety is Renown, with large oval flowers of bright yellow with a deeper colour on the lower floret. A variety with smaller flowers, also rayless, and of a pure rich yellow colour, is Fanny Emmeline, of good habit and free. A good breadth of the old variety Lord Elcho was in evidence, and while it may still be considered useful for the flower garden will not compare with many of the more beautiful rayless yellow sorts. Kitty Hay is another striking rayless yellow, with neat flowers, free, and with a nice habit. Golden Bee is a large yellow with dark rays, something after the style of Lord Elcho, but better. A variety which promises to eclipse all yellow flowers with rays is a seedling named Stephen. This is a large circular flower of the richest yellow, and is of much substance. When comparing this flower with those of other well-known varieties, its superiority was very pronounced. One very effective flower was seen in Sir Robt. Peel, the colour being an exceedingly deep rich primrose self with an orange eye. The contrast is a pleasing one, and as the habit is one of the dwarfiest known, this is an ideal one for bedding. A variety which calls for special recognition is one named Robin. The flowers are rather small, but they are produced in such numbers and so persistently, that from the commencement of the flowering season and until the late autumn there is one mass of blossom studding the capital compact growth peculiar to the variety. The flowers are on short stems and are of the palest shade of bluish-white. A large bed of The Mearns, with its large flowers of a rich plum colour, the upper florets edged white, formed a pleasing contrast to the selfs in other beds. This old variety is worthy of a place in most gardens. Formidable was flowering in a very free manner, its soft lavender blossoms, with white centre and yellow eye, being very restful and pleasing. Sweet Lavender is a variety with flowers of bluish lavender. The habit of this sort is good, and its free flowering is generally recognised. Blue Gown has often been described as one of the best bedding sorts, and, judging from a bed or two of this variety seen here, there is no doubt about it. The flowers are blue, faintly tinted mauve; the habit is dwarf and compact, and the plants one mass of blossoms of medium size. A French-white flower is Niphotos; the blossoms are large with a neat yellow eye. The habit is nice and free. President is an immense cream-coloured flower with an orange eye, and is highly thought of. A good breadth of the popular rayless creamy white Sylvia was in evidence, its dwarf habit and its freedom of flowering being very noticeable. A charming little French-white flower is Sweet Mary. This has a neat yellow

eye and it also possesses a good tufted habit. The beauty of Lemon Queen was strikingly apparent; its large circular flowers of pale primrose-yellow and its tufted, yet vigorous growth should ensure for this variety more extended culture. Jessie Alexander is an exquisite flower of large size and of good form. The colour is rosy pink, deepening to the centre; strong constitution. A seedling to be sent out next season is named Henry IV. The flower is very large, rayless, creamy white, with a yellow eye. A variety with large flowers, upper florets white, lower florets rich yellow, was named Mrs. M. S. Wales. There were several other sorts somewhat similar in colour and form, but this struck me as one of the best.

Ardwell Gem, Duchess of Fife, Goldfinch, and White Duchess were each represented in large numbers, this section proving their value as bedding sorts of the highest order. There were also many other promising novelties which space does

less. The flowers are of good size and even form, with a neat and well-defined yellow eye. The habit is compact and dwarf, and it may be considered a welcome addition to the white sorts for bedding. This variety has had several first-class certificates awarded.—D. B. C.

**White border Pink Albino.**—This was distributed a year or so ago by Mr. T. Gifford, of Tottenham, and it promises to take the lead among the pure white varieties. The plants are of compact, yet free growth, free of bloom, sending up strong footstalks crowned with good-sized white flowers, full of handsome shell-shaped petals. Then it is early to flower, which is an additional recommendation. Compared with other white Pinks I am growing, it is decidedly one of the best, and, further, it misses nothing in the way of fragrance, and is by no means such a bad pod-burster as some others. The value of the Pink for cutting early in June can scarcely be over-estimated. It follows the Daffodil and pre-

flower newly purchased pieces of it, but never a second time, as I have done with Lorteti. Iris persica, if lifted and baked on a greenhouse shelf, does fairly well. I am trying Mr. Ewbank's plan with it also this year.—GREENWOOD PIM, *Dublin*.

## STOVE AND GREENHOUSE.

### AGAPANTHUS UMBELLATUS.

THIS is a most effective subject for setting out in the garden during the summer months when grown in large pots and tubs, the blue umbels of the flower-heads, rising on their tall shafts above the curving green leaves, being admirable in both colour and form.

This Agapanthus is a native of the Cape of Good Hope, where the commonest colour is the blue usually seen in English grown specimens; from this shade, however, in its native habitat it ranges through lighter tints of blue and lavender to white, though pure white is of rare occurrence. In the south-west of England, especially where the soil is not too clayey and retentive of moisture, the Agapanthus flower, well when planted in the open, and requires little or no protection during the winter. In low-lying, damp ground where the soil is heavy the plants start late, make gross summer growth, which gets ladly cut by the first frost, and produce few flowers. In such situations, even in the south-west, pot culture is preferable to planting out, as by the former system abundance of bloom is almost assured. When the pots are crammed with roots flowers are produced in the greatest abundance, but in this condition the Agapanthus is an inveterate pot-breaker, and it is, therefore, well to avoid this by planting in 40-gallon oil casks, sawn across and well burnt out. When painted green or covered with virgin cork these will not prove unsightly. When the plants have filled the receptacle with roots, manure water should be given frequently. The Agapanthus is a moisture-loving plant, and the soil in which it is growing should never be allowed to become absolutely dry if the best results are to be obtained. S. W. F.

**Daphne indica rubra.**—This is seldom met with in the best condition, and the fact that the bloom trusses are such favourites for cutting induces a too free use of the knife on young plants, which consequently frequently do not reach a profitable size. With care good bushes may be grown in pots if plenty of drainage is provided and the foliage is kept free from aphid. The best results are, however, obtained by planting out in narrow borders of loam and peat in a position near the glass, yet shaded from bright sunshine. If the growth is secured to a trellis here and there the majority of it may be allowed to hang down loosely, and after flowering, a slight pruning of the shoots may take place instead of allowing the breaks at the extremities to come away. This keeps the plants better furnished. No plant suffers sooner from over-watering, the leaves turning yellow and sickly.—GROWER.

**Poinsettias planted out.**—As a rule the most serviceable method of growing Poinsettias in pots, as the plants can then be easily removed to where they are of most service. Still, planting out has its advantages where extra large bracts are desired for decoration in November or December. If the plants are put out in a small border at the end of a stove, the flowers make a brave show if left on the plants. At Hillside, Newark, I recently saw some wonderfully fine growths from plants growing in a shallow bed at the end of a warm, moist house. They have been there for several years, and in spring they are cut back to within three or four eyes of the base, eventually producing stout, healthy shoots.



*Agapanthus umbellatus.* From a photograph sent by Mr. S. W. Fitzherbert, Torquay.

not permit one to write about, but which may be heard of before the season is over. Seedlings are raised at Tamworth in immense numbers, the process of selection being a very difficult one. This must be carefully done, or varieties get duplicated, and of course anything of this kind must be avoided. Several unique seedlings were flowering, and these promise in the near future to supersede many sorts which at present find favour. Before concluding this note, special mention should be made of the beautiful effect created on the right of the pretty carriage-drive to Bolehall by the planting of some 50,000 plants in about a dozen varieties of the Tufted Pansy. At the time of this visit, although only comparatively recently planted, the display was quite unique; thousands of charming little blossoms in many different shades of colour made an impression that will always pleasantly be remembered. C.

**Tufted Pansy White Empress.**—In this variety we have a very refined white self and ray-

cedes the Rose, while it associates well with the double and single Pyrethrums. In addition, a good clump can be grown in a comparatively small space, and the flowers last well in a cut state.—R. D.

**Iris Lorteti.**—With reference to Mr. Ewbank's remarks on Cushion Irises (p. 428) I would like to say that this lovely Iris has just flowered with me, producing what is, I believe, an exceptionally large flower. The standards were 5 inches high, and the whole 7 inches through as it grew. The plant was treated as recommended by Mr. Ewbank some time ago in these pages. It was planted on a little mound, and when the growth was withering all the soil was carefully picked out from among the roots, which were baked in the sun under a handlight for two months, after which the plant was fully exposed to moisture, &c. A second plant treated similarly also grew strongly and produced a bud, which unfortunately fell a victim to slugs. I have tried *Iris susiana* in the same way, but have not had much success. I can occasionally

which grow to a great length and are kept away from the roof-glass by bending and tying. Feeding is liberally practised, and the result is enormous bracts of great beauty.—J. C.

#### PELARGONIUMS AT LEWISHAM.

THE Rycroft Nursery, Lewisham, in its earlier days was chiefly renowned for its excellent collection of Chrysanthemums, but at the present time Begonias and Pelargoniums enter largely into competition with the famous autumn flower, and bid fair to occupy almost as prominent a position. Those who only know Rycroft in the short, dull days of the declining year can scarcely imagine how gay the large show greenhouses appear with their present display of brilliant Pelargoniums. The various types represented consist of show, regal and decorative, with an admirable admixture of single and double zonals, and also all that is newest and best in the way of Ivy-leaved varieties, many of which are invaluable for hanging baskets and vases, and have been very greatly improved in form and colouring during the past few years. Most of the Pelargoniums of the show, regal and decorative sections are housed in one of the large 100-foot greenhouses, where they form a striking and imposing array. Altogether there are about 200 varieties, mostly in  $8\frac{1}{2}$ -inch pots, and several plants of each variety for the purpose of keeping up the stock. The Pelargoniums of the three types mentioned appear to be gaining in popularity, and we are assured that the demand for them is very much greater now than was the case a few years ago. Many of them are seedlings raised at the Rycroft Nursery, but it is interesting to record that, although a few are of foreign introduction, the collection as a whole is mainly English, and is conspicuous for the large accession of novelties that exhibit more than ordinary signs of improvement. Bridgroom is a very free-flowering variety of good habit, colour blush-pink, with deep blotches on the upper petals. Queen of the Roses is new, and an improvement on Rose Queen; the pips and trusses are large and the colour soft salmon-pink. Mrs. H. J. Jones is another with very large pips and well formed trusses; the habit is good and it blooms very freely; colour bluish-white with crimson blotches. Ed. Perkins is a fairly well-known scarlet variety. Pearl is a very chaste shade of pure white, edge of the petals crimped; the pips are of good size. A very desirable addition is Mrs. Frank Walker, which has very large pips. It is very free and makes a sturdy bushy plant. Eucharis is one of the finest whites in cultivation and keeps flowering all the summer through; the pips are large and the upper petals have two faint blotches of pale pink. Mrs. Hollingsworth is in colour salmon-rose, with deep crimson blotches. St. Blaise, with medium-sized pips, is free flowering and of good habit; colour deep red, blotched dark crimson. Among other noteworthy examples in this section mention should be made of Alice M. Love, pale soft salmon, with crimson blotches; W. C. Boys, a very pretty shade of salmon-pink and having deep crimson blotches; Ladas, blush-rose, blotched dark crimson; Mrs. W. Wright, very free flowering, large pips and trusses, edges of petals crimped, colour pale blush, upper petals blotched crimson. May Queen, Lady Isabel, Princess May, Agnes Cook, W. Wright, a sport from the preceding, colour bright lilac-mauve; Mrs. G. Gordon, quite new, with large pips and truss, colour white, suffused with a faint rosy shade, to be sent out next season with Mrs. Frank Walker, previously mentioned, and several others also attracted our attention.

#### REGAL PELARGONIUMS.

These were well represented by Duke of York, which has an immense pip and corresponding truss and is very distinct. The colour is a deep rosy marking on a white ground. Lady Duff, a sport from Duke of Fife, has fringed petals, colour rosy red, narrowly edged with white, and a white throat. Prince Henry is a variety

having large pips and a good truss; the colour is a deep rosy red, feathered and blotched. President Harrison in colour somewhat resembles the preceding, but in Dr. Masters we have a flower of a very dark crimson, blotched and feathered dark maroon; the pips, however, are only of medium size, but the plant is very free. Duke of Clarence is another of the deep-coloured kinds. It has velvety dark purple petals and a lighter centre, very striking and effective. In Prince Teck the habit is good and the flowering abundant, but the pips are not so large as in some of the others; the colour is rich rosy red, faintly shaded vermilion. Capt. Raikes Improved is deeper and richer in colour than the original and has a larger pip. It is a pretty variety, as also is Bushmill Beauty, which has a feathery mottled rose petal and a pip and truss of first-rate size. Achievement belongs to the show section; the colour is deep scarlet, with the upper petals blotched deep velvety crimson, centre white. Scarlet Gem, free, good habit, white throat, feathered purple. Bluebeard is another show variety, very rich and effective; the pips are large and the habit compact; colour pale purple, the upper petals blotched with dark velvety purple.

Leaving the large show house in which the above-mentioned types were staged, we passed into another 245 feet in length with a sharply pitched roof and devoted entirely to

#### ZONAL AND IVY-LEAVED PELARGONIUMS.

A brief indication of some of the best of these must suffice. Among double zonals, double Henri Jacoby, Raspail Improved in high tones were good. Mrs. J. Surman, blush-pink; Mr. J. Phillips, salmon; Hermione, white; Joyful, deep salmon; Rainbow, mingled salmon and purple; Apple Blossom, soft rosy pink, quite new; Mrs. W. Morris, deep salmon, rather bright in colour; and Golden Gate, orange-scarlet and of a better habit than most of the yellows, were probably the best. Single zonals were best represented by Wilhelmina, rich salmon-scarlet, large truss; Volcanic, fiery shade of crimson and white eye, large pips and truss; Suvarna, orange-scarlet, large pips and truss; Duchess of York, pure white, very large pips; Bluebeard, deep purple, slightly marked scarlet; Princess Alix, one of the largest pips, colour pale delicate rose; Mrs. D'Ombrain, very large pips, colour salmon, streaked and mottled on a white ground. Others in the single class can only be mentioned by name, as Hilda, Zenobia, Miss Jane Whitelaw, Miss A. Whitelaw, Mr. W. Walters, a fine winter-flowering white variety, Mrs. L. Humphreys, Mrs. G. P. Linford, &c.

Ivy-leaved Pelargoniums have always a beauty and a gracefulness peculiarly their own, and the collection at Rycroft contains a variety of these that should please the most fastidious. Achievement is a cross between a zonal and an Ivy-leaved; it is semi-double and of a charming shade of pale rosy pink, big trusses, and of a nice compact habit. All the true Ivy-leaved varieties we noted belong to the semi-double type, and of these Mrs. Bick, a pretty and distinct variety of rosy purple and very free, was one of the most attractive. Miss Clara Walker, deep rosy pink; Rycroft Surprise, delicate shade of soft salmon-pink; Mrs. W. E. Barling, deep rosy purple, a pretty flower; Doris Farmer, deep bright rose; Rycroft Scarlet, a deep bright shade of colour, indicated by its name; Beauty of Castlehill, with large pips, soft rosy pink; Cuvier, trusses of medium size, colour pale rosy purple, and Phrosa, pale lavender, slightly tinted mauve, were all more or less conspicuous by the purity and delicacy of their colouring, which as a rule is much less varied in this type. A few other good Ivy-leaved kinds were Souvenir de C. Turner, Giroflée, Jersey Beauty, and Jeanne d'Arc.

**Ipomœa Quamoclit.**—I. Quamoclit is a slender growing annual climber with pinnate leaves, the segments of which are remarkably narrow, thus giving to a plant a very light appearance. The flowers are small, bright red or white, and are

borne in the greatest profusion. About half a dozen plants in a pot 5 inches or 6 inches in diameter, into which a few twiggy branches are stuck for the support of the slender climbing shoots, will form a very pretty object in the greenhouse during the summer months, or if the weather is cold and damp an intermediate house temperature will suit this Ipomœa best. When grown in this way the little bright coloured blossoms like scarlet stars are particularly attractive when nestling in considerable numbers among a mass of delicate Fern-like foliage. During very hot summers I have seen it do well in the open ground, but it cannot always be depended upon in this way. Seed is readily obtainable, and will come up very quickly when sown.—H. P.

**Swainsonia Osborni.**—There are several species of Swainsonia all natives of Australia, and of them one of the best known is *S. Osborni*, which for greenhouse decoration from now onwards is very useful. It is a slender-growing, somewhat rambling plant, that may be trained up the roof of a greenhouse, or if preferred secured to a few sticks and treated as a pot plant. This Swainsonia is somewhat sparingly furnished with light pinnate leaves, from the axils of which towards the end of the shoots the flowers are produced. The individual blooms are Pea-shaped, quite an inch across, and of a bright purplish-red colour, with a white spot in the centre. These flowers are borne in upright racemes, the more vigorous having about a score of flowers in each. It commences to bloom, as a rule, about midsummer, and will often continue till the end of August or even later. When grown as bush plants in pots they should be cut back rather hard before starting into growth in the spring, as such treatment will ensure a bushy habit. The genus Swainsonia is very nearly related to the *Clianthus*, and I once saw a particularly fine specimen of *Clianthus Dampieri* grafted on to a plant of Swainsonia.—H. P.

## KITCHEN GARDEN.

### SPRING CABBAGE.

ON the growing of Cabbage for spring supplies much depends upon the time of sowing, the variety sown, and the soil and locality. I think there is a great gain in making several sowings in preference to one, as by so doing should one crop fail the others may succeed; indeed, I treat Cabbage more like Lettuce, and sow every few weeks from January till July 25, not large sowings, but enough to keep going. The earliest is made in a frame, and the plants from this sowing are now fit for use. These follow the ordinary spring Cabbage. Some of my readers may think this crop following so close on the one named is not required, as the autumn plants would produce a summer crop after being cut over. I do not care for them to do so, as young, tender heads are preferred, and what is better, the ground can be utilised much sooner. I usually make a sowing for very early supplies in June. This is, I know, not the regular routine, but if it answers it is worth a trial. In cold soil or late localities I would not defer sowing after July 15. It is a good practice to sow twice, with a fortnight between the first and second sowing, for spring supplies. I am aware in certain soils the dates are early, but a sturdy plant is a necessity. I am not an advocate for planting the autumn-sown plants, as they are usually termed, in rich soil. In many gardens quantities of manure are given and the ground trenched, and when the weather is severe the plants are so soft that they are cut down or lose their leaves before new growth is made in the spring. I do not condemn trenching, but I find (in our light soil) a firm root-hold means hardiness. In heavy

clay soils this would not apply. One must in a measure study soils, locality also, as in exposed places growth is more sturdy.

Small plants do not require large masses of rank manure, as they make but little growth from October to March. Far better feed from the time new growth is active. There is plenty of quick-acting fertilisers one can use, and liquid manure can often be employed. This is of great assistance, and the young plants soon heart and are fit for use. A later sowing is made from July 20 to July 25, and unless there is any mishap, this is a small one, as the plants sown under glass in January are quite as early, given good culture. I need early supplies, and I think early Cabbages in all gardens are appreciated. The later sowing may be termed a safeguard in case the first should fail in any way. I think much depends upon the way the plants are raised. Here good land, well enriched, is needed, as a quick growth is essential. Plant the main batch at the end of July. Full early many will say, especially in our warm soil; but earliness is our aim, and it should be borne in mind we place a good plant in what may be termed a poor soil. By a good plant I mean a strong one, with a short stem and vigorous. Drills are drawn in hard land, so that moisture is readily conveyed to the roots, and growth is hard and able to withstand our variable winters. A small plant from the later sowing would not be ready to plant till mid-October, and if a wet autumn followed would not be in condition to stand a hard winter. Plants from these late sowings come in useful as a succession to the first sowing. They may be wintered in the seed-beds, or, what is better, pricked out in rows rather closely at the end of October. Often one sees the plants in such a crowded state that it is impossible for the seedlings to develop. Quite as much care is needed at the start; indeed more, as a weak, crippled plant cannot grow freely. Ample space in the seed-bed is important, and planting out as soon as the plants are large enough; indeed, better results are secured by planting before the plants get too large, as a much shorter leg or stem is obtained, and I find the plants which touch the surface with their lower leaves winter better than those with long stems, which are apt to be twisted by rough winds. Frost cripples them, and they are the first to run in the early spring. G. WYTHES.

**Sowing Coleworts.**—This most useful winter vegetable appears to be becoming better known, but mistakes are often made in its culture, one of the commonest being sowing the seed at the wrong time. Several times I have seen Coleworts in full heart during September and October, and even earlier than that. At this date autumn Cabbages are in season, which lessens the value of the Colewort. Not only so, but, like the Savoy, their quality is much improved by having a fair amount of frost on them, and their extreme hardness renders them safe to grow even in the coldest districts. I sow my seed from the 1st to July 7, and another batch about the 15th, and in the majority of seasons this brings them to perfection from the middle of November onwards, as, fortunately, they do not heart in all at once, but piecemeal, and, another thing, they remain in good condition for a long time.—J. C.

**Cucumber Frogmore Prolific.**—Of the newer types of medium-sized handsome-shaped Cucumbers, one of the very best is Frogmore Prolific. I saw it recently at Hillside bearing a wonderful crop, and Mr. Day, the gardener, considers it of excellent flavour. In my opinion it is just the Cucumber to grow for market, as the majority of buyers prefer a small well-shaped fruit to the larger varieties. Verdant Green is not unlike the above sort in shape and general

appearance, and is a very reliable variety. At Hillside the beds in the Cucumber house are rather limited in width and depth, which is doubtless an advantage, as when the roots are working in a large quantity of rich soil a gross, unfruitful growth is encouraged. Mr. Day believes in a limited root-run, in feeding by top-dressings, and liberal supplies of liquid or artificial manure when the plants are carrying a good crop.—C. C. II.

WINTER CROPS.

THERE should be no lack of all kinds of Brassica plants to select from for filling up the different quarters, as the weather has been all that could be desired to bring the plants on strongly. The great thing one has to study now is to get them into their winter quarters before they become too large, as they are growing rapidly and will soon spoil if left in the seed-beds. The recent rains have made the ground in such a good condition to receive the plants that such a favourable opportunity should not be lost if possible. The greatest difficulty will be in finding sufficient vacant space for putting them out in most gardens, but by the time these notes appear some of the early batches of Peas will have been cleared off, which, if the surface soil is simply hoed and the rubbish raked off, will provide room for some of them. Some of the early varieties of Strawberries, too, will have been gathered, and where the plantation is upwards of three years' standing these may be destroyed with advantage, and the firm ground that will then be at liberty will prove the best position in the garden for Late Queen, Model, or other favourite late varieties of Broccoli. The error that is made in planting the above on heavily manured and recently dug ground has often been pointed out in these pages. This encourages gross growth, which is not capable of withstanding a severe winter. All that is necessary after destroying the Strawberry plants and freeing the surface of weeds and rubbish is to give the ground a good hoeing, and form the holes to receive the plants with a crowbar. Under these conditions growth will be slow, but the stems will be short and hard, and the foliage small but much firmer in texture than would be the case if grown under more generous treatment. I have taken advantage of such a favourable planting season, and being rather short of available ground at the time, to lift a good portion of the early and second early Ashleaf Potatoes to make room for a good batch of Autumn Giant Cauliflower and Veitch's Autumn Protecting Broccoli. The tubers, although barely ripe, will take no harm, and will do for immediate use, but to keep them in as good a condition as possible they were lifted carefully and spread out thinly in a cool, dark cellar and covered with straw. Indeed, when we consider the moist state of the ground, together with the great heat, I am not sure but what the tubers are as well out of the soil as in it, as they are practically as large as they ever would be, and there is a danger of them starting into growth with the heat and moisture contained in the soil. Of course, this should not be attempted with late varieties, but only the earliest whose haulm has finished growth and which is showing the first sign of ripening. This is a better plan than allowing the Potatoes to remain in the ground and placing the plants between the rows, as the haulm hampers sturdy growth and the plants suffer more or less in consequence. Where it is not desirable to lift the whole of the early Potato crop, every other row might be dug up, which will allow room for a few rows of plants which require planting at once, a successional one being made later, after the whole of the ground is cleared. Even in this case the ground should be levelled and made as firm as possible before the plants are put in.

Most growers have their favourite varieties of Broccoli to form a succession, and rightly trust to those which have proved the most hardy in their different localities. The great thing, however, after having made a selection of varieties, is to plant them in proportion, especially in a private garden,

so as to maintain a regular supply throughout the winter rather than having more than is required at one time. For instance, if ground is available, say, for ten rows of plants, two rows of each of the following should be planted: Veitch's Autumn Protecting, Snow's Winter White, Dilcock's Bride, Leamington, and Model. Of course, this is only a short list of the standard varieties for early, midseason and late supplies, and may be supplemented with several others where space allows of their being planted, though it is well to bear in mind that the season of most of these named may be prolonged by sowing at different intervals. Thus, although the first is named Autumn Protecting, it forms a good succession to Autumn Giant Cauliflowers where raised and put out early, while the same may be had in good condition often as late as February, from later sowings. Of other well-tried varieties, Spring White, Cooling's Matchless and Perfection may be named for winter and early spring use, and, to succeed these, Late Queen, Latest of All, and Cattell's Eclipse will keep up the supply well into May, with Veitch's Model maintaining succession until early Cauliflowers are ready. In each case small sturdy plants should be selected in preference to large ones, as these invariably take root quicker and prove more satisfactory than those which look much stronger at the time of planting. Although perhaps Broccoli forms the principal winter crop, there are others equally as serviceable, and often prove more hardy, which must not be neglected. These comprise Savoys and the different Bore-oles. The former perhaps can hardly be termed a choice dish, but they often prove valuable, and are appreciated when other things are scarce, especially at mid-winter. These are sometimes objected to because they are coarse, but by growing the dwarf varieties, and selecting the smallest heads, they make a change, and can hardly be objected to by anyone, especially at the season named. From the want of room we have planted a double row of Tom Thumb between newly-formed plantations of Currants and Gooseberries. The bushes being planted 4 feet between the rows, there is plenty of room for a double row of Savoys, as this dwarf variety may be planted 1 foot apart each way. Provision should also be made to make a planting now, and also for successional ones, of the different Kales, as these often prove invaluable during March and onwards, when other things are cut up with searching winds. The dwarf curled varieties when sown in May generally succeed the best, and may be planted 15 inches by 12 inches apart. These, after being cut over in spring, will afford a supply of delicate sprouts until the Asparagus season arrives and spring Cabbage becomes plentiful. These, together with Broccoli, Brussels Sprouts and other winter crops, should have the surface soil frequently hoed between them as they commence to grow, which will not only stimulate growth and keep the plants free of weeds, but slugs and other vermin will be kept in check, and the plants will make steady progress and yield good returns.

R. PARKER.

**Planting green crops.**—By sowing the Brassicas at a fixed date one cannot always have the land to plant the same, and this is a difficulty many growers have to contend with. Unless means are taken to thin out the seedlings, the plants will be poor when ground is available. I am aware we often sow much too thickly, and at this season what is termed pricking out is not always attended to, so much other work needing attention. For some years I have grown large quantities of Strawberries as annuals, and this gives me much space for winter crops. The Strawberries are not left a day after the fruit has been gathered. The tops are burned, the ashes spread, drills drawn, and a good breadth of winter greens got into their permanent quarters. As the weather of late has been favourable for planting, there is little delay, and a much better result can be secured by early planting. I am in favour of a firm root-hold for winter green

crops. Broccoli planted on hard-trodden land recently cleared of Strawberries makes a sturdy growth and is less susceptible to frost. I admit there may be less bulk, but size is not everything, and it is a great gain to the grower to preserve his crop and get a good return. There are other means to obtain a good plant, and I find later sowing than is often advised one of the best. If ground is not vacant, pricking off into lines is a safeguard, and may with advantage be practised when planting out cannot be done; there is a saving of time in the end, and a much better plant is secured. It is not possible to maintain a healthy plant in a crowded seed-bed. No matter how well watered, the plants get thin, long, and lose roots; pricking off prevents this, and a small quarter of prepared plants is much sooner attended to as regards moisture than seed-beds in which each plant is struggling for existence.—G. WYTHES.

**Shallots.**—It is surprising to find how popular these savoury bulbs are with cottagers and allotment holders. No crop seems to be in such cases more common, few are better grown. The old true Shallot and the Large Red or Jersey are equally well grown. Many of the workers like them for ordinary flavouring; others like them pickled, especially the smaller true Shallot. This variety, though the bulbs are not large, comes on good ground not only of good size, but in large clusters and remarkably clean. They should when well grown wear a satiny aspect. For domestic use the true Shallot is much better worth cultivating than the Large Red, which often resembles the Potato Onion in size and taste. Planted in rows 12 inches apart on good soil in February, growth soon follows and the produce is early ripened and ready to clear off early.—A. D.

#### CUCUMBERS AND VEGETABLE MARROWS DROPPING OFF.

I SHALL be much obliged if you will give me a hint in your next number as to the prevention of the following: Cucumbers in frame and Vegetable Marrows outside, form, grow on a little, and then die off, rotting from the end. Is it from over-watering or what? Water is generally given in the middle of the day, but withheld if dull or if the frame seems to be damp enough.—DOLAN.

\* \* In all probability insufficient warmth at the roots is responsible for the failure of Cucumbers to grow. Hotbed manure soon becomes rotten, and repeated waterings keep it in a cold, saturated state, the roots perishing when they come into contact with it. Should the warm nights and hot days continue, an improvement may be effected without a change of treatment, but a lining of nearly fresh stable manure, previously well prepared, the rank heat being got rid of by fermentation, would do good, especially if the weather should happen to be duller and colder than now (July 1). Crowded haulm may be the cause of the fruit failing to develop, and it ought to be thinned out accordingly, a repetition of this occurrence being prevented and abundance of fruit forced out by stopping all young lateral growth beyond the second leaf while yet it can be done with the finger and thumb. Continue to syringe or freely sprinkle the foliage on bright days, when the frame is closed at about 4 p.m. or rather earlier, and also keep the soil fairly moist without unduly saturating the manure below. Syringing at mid-day is unusual in the case of Cucumbers in frames. A heavy permanent shading would be injurious and seriously militate against productiveness. Shade with scrim canvas or cotton blinds during the hottest part of the day, or from 9 a.m. to 4 p.m. (to be on the safe side), and admit sunshine and light during the rest of the day. Never use cold water. That warmed by exposure in tubs to the sunshine is what Cucumbers like.

Vegetable Marrows grown too luxuriantly frequently fail to set and swell their fruit satisfactorily. Those cultivated market growers' fashion, that is to say, in the open fields with only a good

layer of manure under them, are usually the least vigorous and the most productive. These do not need daily waterings—in fact, would be better without them, especially if cold water is used. Exception to a certain extent may be made in favour of any unwisely planted in a heap of loose, quickly drying material, as this needs a good soaking of water much oftener than garden soil over a shallow bed of manure. Cold nights may have had something to do with the failure, and a change for the better may be followed by abundance of Vegetable Marrows. A check to very luxuriant growth may also, and does frequently, result in the rapid production of fruit.—I.

**Saxifraga cochlearis minor.**—This free-growing and pretty kind has been flowering abundantly during the past fortnight or so, and its pretty sprays of white, pink spotted blooms are very pleasing. It is essentially a plant for the rock garden, and for positions where its prettily crusted rosettes of leaves may be seen in company with time-marked nuggets of rock against which to nestle. In soil that is fairly deep and good, quite small plants soon spread out into compact tufts, and these if pulled to pieces and carefully replanted early in spring may soon be converted into a group 1½ feet across. Solitary tufts when allowed to cluster together into cushion-like mounds do not always flower with the same freedom as do smaller pieces that are replanted periodically, an item equally applicable to the Aizoon as well as other of the tufted kinds. It is not annual attention that is necessary for this, but separated every three years would be the means of securing a better flowering generally with many free-growing kinds. Some readers of THE GARDEN may not recognise the plant referred to above by its present name, since it is only rarely we see it correctly labelled. Invariably at the Drill Hall the plant is named *S. valdensis*, which is quite a distinct plant, generally smaller and not so free in growth or so easily cultivated.

**Philadelphus microphyllus.**—Just now the various species and varieties of *Philadelphus* are—if we exclude the *Roses*—the most conspicuous and beautiful of hardy shrubs in flower. Some of them are 10 feet, 12 feet, and, in thickly planted shrubberies where they have been drawn up, as much as 15 feet high. *P. microphyllus* is, however, the smallest of the cultivated species, and does not, apparently, get more than 2 feet to 3 feet high. It thus becomes useful for positions too restricted for the taller kinds, none of which can be pruned back without affecting their freedom in flowering. *P. microphyllus* is a rounded bush of very dense habit and with slender, wire-like stems. The leaves are ovate, about half an inch long on the young growing shoots, but only half as large on the flowering ones; they are shining green and glabrous above, greyish and hairy beneath. The flowers are pure white, each three quarters of an inch in diameter, and borne at the end of the twigs that spring from the axils of last year's growth. Their fragrance is sweet and strong, and out of doors very pleasant, strongly suggesting that of a Pine-apple. It is a native of New Mexico, Colorado, &c., and is therefore (although quite hardy) from a region that has supplied English gardens with very few shrubs that are hardy. It is necessary, as might be judged from its native home, to reserve for it a sunny position.—W. J. B.

**Anemia rotundifolia.**—This is one of the class known as flowering Ferns, in which the fertile fronds that are pushed up from the centre of the plant are totally distinct from the sterile ones, and in some kinds at least they greatly resemble the inflorescence of some herbaceous subjects. One of the commonest examples of this class is our native Royal Fern (*Osmunda regalis*), but there are several others, and among them some tender kinds. Of those that require the protection of a stove, *Anemidietyon phyllitidis* is frequently met with, while the different members of the genus *Anemia*, of which half a dozen species or thereabouts are grown in this country, are all

comparatively scarce. A very pretty member of this genus was shown at a meeting of the Royal Horticultural Society in the early part of May, when it was awarded a first-class certificate. This was *Anemia rotundifolia*, a low-growing, but spreading plant, whose comparatively long arching, barren fronds are furnished with roundish pinnae of a leathery texture and deep green in colour. The midrib is prolonged at the point for some distance beyond the pinnae, and it roots at the extreme tip and produces a young plant there. A well-grown specimen is particularly attractive and distinct, the arching fronds being disposed in a very graceful manner, while they are over-topped by the plume-like fertile ones. A very distinctive and charming feature of this Fern is the beautiful reddish-bronze tint of the young fronds, which as they mature become green. It can be raised from spores, and also increased to a limited extent by means of the young plants borne on the ends of the fronds. This *Anemia* is a native of Brazil and needs stove treatment for its successful culture.—H. P.

## GARDEN FLORA.

### PLATE 1126.

#### STENOGASTRA CONCINNA.

(WITH A COLOURED PLATE.\*)

OF all Gesnerads this is one of the most charming, and certainly it is the most diminutive of all in cultivation. The accompanying plate gives a good idea of its features except that its capacity for flowering is by no means fully indicated. The flowers, in season, are at least twice as numerous. They are beautifully and faithfully depicted, but my impression is that the leaves are always rounder and never so long as some of those shown in the plate. Though little known out of botanic gardens this plant is not new, having been introduced by Messrs. J. Veitch and Sons about thirty-six years ago. It has long been grown at Kew, and for many years it has been a favourite plant at Cambridge, never failing to excite admiration and interest. It flowers over a long season, but is in greatest perfection in spring after its rest and when making new and vigorous growth. The subterranean tubers, from which the leafy and flower-bearing stems arise, are comparatively small, scarcely equalling a Hazel-nut in size, and to get a good effect, from six to a dozen may be planted in a pot or pan according to its size.

Its culture presents no difficulty, and if rightly managed its propagation is only limited by the number of stems available, since every one can be rooted and made to form its own tuber. It should have good drainage and a soil composed of about half peat and half loam, with a liberal admixture of coarse sand. In potting, the soil should not be too deep, and lumps of sandstone here and there may appear just above the surface. During growth it should never be dry nor should it, when at rest, be quite so dry as would be right for other Gesnerads. It is best not to stow the pots away—a plan by which choice plants are sometimes lost. Let the plants remain where they may benefit from the general moisture of the house and be watered if necessary. There is no better position for this plant than a shelf near the glass and below the line of sight, if possible, for purposes of careful observation. The name here adopted is the old familiar one, but strictly the generic name is now *Sinningia*, of which *Stenogastrea* forms a section. All the *Sinningias* come from Brazil, and among them the well-known *Gloxinia* of

\* Drawn for THE GARDEN in the Cambridge Botanic Garden by H. G. Moon. Lithographed and printed by J. L. Goffart.



STENOCHA. PEA. (MONTANA)



gardens, the *Biglandularias*, *Tapeinotes*, &c. The earliest and only description I am acquainted with, under the correct genus, is that by Nicholson in his Dictionary. A figure is given in the *Botanical Magazine* of 1861, t. 5253.

R. I. LYNCH.

*Botanic Gardens, Cambridge.*

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**CABBAGE.**—In many gardens sowings have been made of both Little Pixie and Rosette Colewort, as it is generally recommended to do so about the middle of June. For various reasons I consider this is somewhat early, especially if a suitable piece of ground is not available for them as soon as they are large enough for putting out, as the plants become stunted if kept in the seed-beds longer than they should be, and often fail to grow freely afterwards. It is surprising how quickly both these turn in, when planted on good ground, and to have them too early in the autumn, when perhaps other vegetables are plentiful, they do not prove so serviceable as later in the season when there is less variety to select from, while if they are required for spring use, early sowing is against them keeping properly through the winter. If seed be sown of each now, good plants will be ready in about six weeks, when there will also be more vacant ground suitable for this crop, such as that now occupied with second early Potatoes, Spinach, French Beans, and other things. Small sturdy plants always prove the most satisfactory; therefore the seed should be sown thinly, and preferably in drills, as the soil can be kept free of weeds, and the seedlings receive more light and air than when sowing is done broadcast.

**BEANS.**—It is not usual to sow Broad Beans at this season, but in some establishments they are appreciated in autumn if in a young and tender condition. A few rows of either Beck's Dwarf or Early Longpod may prove very useful later on if seed is put in now. The former could succeed early Potatoes on a warm border, and being of a dwarf habit protection is easily afforded in the autumn should it be necessary to do so. Towards the middle or end of the month another sowing of Sion House or Ne Plus Ultra French Beans may be made in such a position that a frame may be placed over them in the autumn if desired. Those that are now in bearing should be looked over daily and the crop kept closely gathered, as when the pods are allowed to remain and form seed it is at the expense of future supplies from the same plants. Although it may form a pleasing sight to see a very full row of Scarlet Runners, overcrowding is a common error and should be avoided. If only one plant were allowed to each pole, and these say 9 inches or 12 inches apart, finer Beans and a more lasting supply would be obtained. A little timely attention in regulating and stopping the most forward leaders would induce a more regular growth, and they would not become top-heavy, as is often the case towards autumn, when they are allowed to grow anyhow. This crop well repays for copious supplies of manure water. Like the dwarf varieties, a large number of old pods should not be allowed to form, as they have a most weakening effect on the plants. This is generally a favourite dish with exhibitors, and to obtain fine straight dark green pods they should be carefully selected and the pods thinned.

**ENDIVE.**—Although well-blanching Endive is always appreciated in salad, it is somewhat difficult to prevent the plants running to seed from early sowings. Seed, however, put in now may result in a good return. Ground that has been cleared of Potatoes may be used for this crop, but before the seed is put in the soil should be carefully forked over and well broken to pieces. Where this is found to be hard, dry, and lumpy, water over-night and it will fall to pieces the following morning. I prefer sowing in drills where

the plants are to remain. This not only saves the time of transplanting, but there is less risk of the plants running to seed through any check being given. Sow the seed thinly and cover with fine soil. The seedlings should be thinned down to about 6 inches apart if the Green Curled variety is grown, allowing a little more room for the stronger-growing Broad-leaved Batavian. Slugs often do much damage to the young plants during showery weather, and to guard against these, a slight dressing of soot or lime should be given after the seed is put in, repeating this occasionally when the plants come through the soil. Birds, too, are very partial to the seed, and the bed should be netted where these abound.

**CELERY.**—The earliest batch, or that required for use say at the end of August and during the following month, should now be well forward and ready for the first moulding. This requires to be done carefully and the soil put round the plants in small quantities, or there is a danger of some of the mould either getting into the centre of the plants and destroying the hearts, or when too much is afforded at once and made too firm it checks the free development of the young central leaves, and these become contracted, and if not absolutely spoilt, it detracts from the appearance when ready for use. The plants should be looked over carefully, and all decayed leaves and sucker growth at the base of the plants removed. The trenches, too, should be freed of weeds and rubbish. If rains have not been abundant and the soil is only moderately moist, a thorough soaking of liquid manure should be given some hours previous to moulding up. This is most important, as the addition of soil round the plants will prevent to a great extent future rains reaching the roots, and the plants in all probability will suffer from the want of moisture, which at no time should happen with Celery, or the produce will be tough and find little favour. After seeing that the roots are made all right in this respect, break the soil down on either side of the trench as fine as possible, so that it can be easily worked round the plants with the hand. Gather all the outer leaves round the plants in such a way that the soil cannot get into the centres and only make it moderately firm, sufficient to keep the foliage in position without crowding it together too tightly. It is best to do such work piecemeal, affording more soil once a fortnight, which will allow growth to be always a little in advance, the final moulding up being done, say, a month before the Celery is required for use.

**CUCUMBERS.**—Plants growing in frames in hotbeds that have been in bearing since April will now be showing signs of giving out, especially if they have been heavily cropped, and if it is required to keep the plants in a full bearing condition as long as possible, it will be necessary to thin out a lot of the old growth, together with a good portion of the foliage, so as to allow room for new growth to form and develop properly. A portion of the plants, too, should have all the young fruit picked off as soon as it forms, together with the male blooms, for at least a fortnight, so that the plants may have a little time to recoup themselves. The surface soil should be slightly disturbed and an inch or so of light, rich, porous compost afforded, to which should be added a slight sprinkling of soot. If the soil is heavily charged with moisture through constantly syringing the foliage, withhold water for a time, but make sure that this is the condition of the soil, say a foot deep, where most of the roots abound. Although the surface may appear wet, that beneath may be just the opposite, as the fermenting material forms a drainage, and there is a danger of the plants suffering from dryness at the roots at a time when it is considered they are all right in this respect. When water is required, a thorough soaking should be given through a coarse rose can, sufficient to penetrate through the whole of the compost and at a temperature of not less than 80°. Plants which have been rather severely pruned should be kept close and shaded for a week and the foliage dewed over

morning and evening. If the roots are healthy, new growth will soon form. This must be kept pinched at about the third leaf and regulated over the surface of the bed. Should the linings have receded from the sides of the frames, a foot or so should be well shaken out and mixed with some fresh litter. This, when replaced and made firm round the frames, building it well up to the top of the woodwork, will afford a gentle warmth, assist to retain moisture in the frame, and the plants will be greatly benefited thereby. Although plants treated in this way will mostly throw off a good second crop, it is hardly safe to trust to them to supply a large demand towards autumn. To meet this, another batch of plants should be raised now, either from seed or cuttings, and grown on ready to succeed the early batch. Another frame or house of course must be available to receive the plants, or a break in the supply for a few weeks must result if the old plants have to be cleared out to make room for them. At the time of writing we are having dull showery weather, and there is always a danger of Cucumber plants growing in light houses suffering by a sudden burst of sunshine. To guard against the foliage being scalded, a little whitening should be in readiness for syringing over the roof-glass, which would prove more beneficial to the plants than suddenly throwing the ventilators open with a view of reducing the temperature: the evil of such a practice cannot be too freely condemned. Heat, moisture and a certain amount of shade are very necessary to keep the plants in active growth, free of red spider and other insect pests.

R. PARKER.

### FRUIT HOUSES.

**PEACHES AND NECTARINES.**—Early-forced trees having been relieved of their crops, surplus shoots and the now useless bearing wood must be kept cool to enable them to retain their foliage as long as possible. To keep the leaves free from red spider and the ends of the shoots clear of aphides, the syringe or garden engine must be brought into play each day, particularly in modern houses having fixed roofs. Stop all lateral growths while it can be done with the finger and thumb, and above all things see that the borders do not get over-dry. By paying particular attention to these details, and also giving the roots the benefit of a soaking of liquid manure or a chemical stimulant in cases where the trees lack vigour, the trees will be the better prepared for the ordeal of early forcing another season. As the crops are gathered from the trees in successional houses, look them over, thin the wood if too thick, cut away that which has recently borne fruit, and in other particulars treat as advised above.

**LATER HOUSES.**—Trees on which fruits are ripening will need every encouragement as regards heat, moisture, and stimulating food, which should be applied when the borders require water. Well-drained Peach borders require a great deal of water, and this the trees must have right up to the time the fruits ripen, but feeding must cease once the pulp in the fruits is on the point of softening. Overhead syringing must also be discontinued once this stage is reached, but damping of floors and borders may go on until the fruits are ripening generally. Less advanced crops of fruit should have all leaves turned on one side and tied out of the way when shaded wholly or in part by them, and fruits inclined to droop downwards should be elevated towards the sun on strips of lath to ensure high colour. Keep all young shoots thin and carefully tied down to the trellis, and pinch lateral growths at the first leaf. Air liberally on fine days, syringe freely, and keep borders well supplied with moisture. Thin the fruits on the latest trees if not already done, pay every attention to border watering and syringing, keep the young wood thin and neatly tied down, and as soon as the fruits begin to swell freely stop all growths beyond them as an inducement for them to swell the more quickly. Well water borders if in good order, and feed according to the age and vigour of the

trees and their capabilities of assimilating the same. The ventilators of late houses may be left open continuously when warm weather prevails, but they are best closed when a sudden change to cold takes place such as occurred on June 14 and four succeeding nights, on account of the liability of an attack of mildew.

**FIGS.**—The fruit on pot trees carrying heavy second crops should be thinned before they get too far advanced. It is better to do this than distress the trees and run the risk of losing a first crop next season. These fruits will not attain to so large a size as those of the previous crop, but they are none the less useful when ripe. Figs are in almost constant demand. When the first crop has been gathered from second early trees, well wash the foliage, close the house, and start feeding the trees again to induce the second crop to swell quickly. If the mulch or top-dressing is worn out through repeated applications of water, remove as much of it as possible and apply fresh materials. Fruits on trees in succession houses will be fast approaching the ripening stage and in some cases will be ripe, when former cultural details as to the diminution of moisture and keeping up a circulation of dry warm air, together with ample ventilation by day and a lower amount at night, should be observed. In later houses such matters as the thinning and tying down of young shoots must have regular attention. It is highly necessary that the wood should be kept thin in these trees, so that it becomes thoroughly ripened by the end of the season. It is astonishing the number of fruits that well-ripened pieces of wood will produce, especially when trained directly under the roof. As mentioned in a previous calendar, young growths on all of these later trees must not be stopped, but laid in full length for future fruiting. Old trees are sometimes apt to throw up a good many suckers. These are best pulled out, as they seldom become sufficiently ripened to produce fruit. The Fig being a gross feeder, all these late trees should have free supplies of liquid food, particularly when the fruits start swelling after flowering, and this may be continued up to the time the first fruit ripens. Due attention must also be given to the mulching of borders and the daily syringing of foliage to keep off red spider.

**CAPE GOOSEBERRY.**—Established plants carrying good crops of fruit will need plenty of water and an occasional stimulant. Guano used in sufficient quantity to tinge the water is most beneficial, and at this strength may be applied again and again without fear as to results. Young plants raised from seed during the spring should be shifted into 12-inch and 14-inch pots, and as soon as the roots become active in the new compost, pinch the shoots repeatedly, or until good bushy heads are formed; they may then be allowed to bear, and the fruits will come in useful during the autumn months, when a full and varied dessert has to be forthcoming. A warm greenhouse or an orchard house answers well for the Cape Gooseberry, or it may be trained on the back wall of a Peach house. Grown in this way but little fruit would be produced the first season, as, unless planted early in the year, the energies of the plant would be principally expended in producing growth.

**HARDY FRUITS.**—Well wash early Cherry trees from which the crop has been gathered and fasten back to the walls any young shoots which had to be neglected through the trees being netted. Successional varieties on walls and trees in the open quarters should also receive a final cleansing and be netted over, otherwise birds will soon take the lot. Unless the nets are sufficiently wide to rest on the ground, they should be strained and pegged down, for if only one gap be left large enough for birds to enter they will quickly discover it and avail themselves of it.

**BUSH PLUMS.**—Owing to the light crops that the generality of these are carrying growth is very luxuriant, and had better be stopped at once. All shoots on the spurs on the main branches should, therefore, be stopped at the fourth leaf, counting from the base, while the

leaders at the ends of the branches may be left either half or two-thirds their length according to the size and age of the trees. If the trees are trained pyramidal shape, the leader may be left nearly full length in the case of young trees, but if established, cut them back about half way. Any trees which have failed to bear for the past few seasons and which make rampant growth should be marked for lifting during next autumn.

**LATE STRAWBERRIES.**—These should be kept hand-weeded, and if the fruits do not swell freely, through a weak condition of the plants, give them the benefit of a soaking of liquid manure. This must, however, be quite clear, otherwise there is a possibility of a deposit being left on some of the berries. As soon as the fruits begin to colour net them over. Get forced plants set out as soon as a piece of ground of due proportions is at liberty, and prepare ground in due course for planting with early layered runners after a sufficient number has been procured for pot work. A. W.

## ORCHIDS.

### VANDA DENISONIANA.

The blossoms of this delightful species are totally different from those of any other Vanda in that they are of the purest white, no tint of colour appearing either on the sepals, petals, or lip. In habit the plant is like a dwarf *V. suavis*, the leaves deeply channelled and much decurved, the flower-spikes appearing at the base of these when about a year old. Each flower of a good form would measure 2½ inches to 3 inches across, the sepals and petals being narrowed at the base, spreading higher up, and the lip three-lobed, somewhat fancifully described by Reichenbach as like the tail of a black cock. Six or eight of these flowers are produced upon a spike, and the present is its flowering season. The plants may be grown either in pots upon the stage or in baskets and pans suspended from the roof glass, the latter way being perhaps the more suitable owing to the freedom with which both air and light play about them. When newly imported, considerable care has been found necessary to prevent the foliage becoming loose at the axils and dropping, this being so troublesome in some cases that the plants have been entirely lost. Doubtless in a measure this is due to the time the plants are collected, and in many cases can only be partially prevented, but if more care were taken to keep water away from them when first introduced to heat there would be less trouble from this damping of the foliage. I have found such plants do well suspended upside down from the roof in a shady part of the East India house until they begin to plump up, when each plant may be separately placed in as small pots as convenient, using clean, finely broken crocks in lieu of compost. Thus after their long drying they are brought by degrees to more moisture, and their power of absorbing it becomes gradually stronger.

*Vanda Denisoniana* is not quite so strong rooting as some nearly-related kinds; consequently even for well-established plants the receptacles need not be large. If pots are used, drain them well and repot when the roots are commencing to push in spring. The cleanest and best Sphagnum obtainable mixed with charcoal and potsherds is all that is needed for compost, and this may be somewhat firmly placed over the drainage. Cut the ends off tidily and place the plants with as little delay as possible into the growing quarters, the East India house suiting it best. The plants must not be allowed to want for water, but no more than is absolutely necessary should be given.

Plants not over-supplied with roots may be left to get well on the dry side before giving a fresh supply of moisture, even while growing, and during the winter months a nominal quantity suffices. The foliage must be kept free of insects and especially scale, to which it is subject, or good results must not be looked for. *V. Denisoniana* is a native of the higher mountainous parts of Burmah, and was first discovered by General Benson growing on tall trees at an altitude of about 3000 feet above sea level. This was in 1868, and about a year afterwards it flowered for the first time in England with Messrs. Veitch. There is a variety called *hebraica*, owing to a supposed likeness in its lip markings to Hebrew characters. The sepals and petals in this case are pale sulphur-yellow. This plant was imported and sent out by Messrs. B. S. Williams and Son, who received it among an importation of the typical form about 1885.

***Dendrochilum Cobbianum.***—This is a pretty plant just commencing to flower. It is distinct from the better-known *D. glumaceum* in having longer and thinner pseudo-bulbs, the flowers occurring on long racemes, and a pretty pale yellow in colour, with an orange lip. It requires plenty of heat and a moist atmosphere while growing, the water supply being in accordance with the state of growth. It is a native of the Philippine Islands, and was introduced in 1880 by Messrs. Hugh Low and Co.

***Odontoglossum cordatum.***—Few *Odontoglossum* plants vary more than this in the quality of their blooms, though but few named forms are described. A good variety is now in flower with me, the sepals orange-yellow, heavily blotched with brown, the heart-shaped lip pure white excepting just the tip, which is reddish brown. It is a native of Guatemala, and does well with *O. grande* and similar kinds here in a cool fernery. It was first introduced about sixty years ago, but was afterwards lost to cultivation.—II.

***Stanhopea insignis.***—This is a handsome plant now in bloom, the scapes containing from three to five flowers, each about 5 inches across. They are straw-yellow on the sepals and petals, spotted with purple, the lip white, with a deep purple blotch in the cavity in the centre. *S. insignis* is the type on which the genus was founded and the first to bloom in this country, which it did as far back as 1829. It requires ample warmth and a very moist atmosphere to do it well, and should be cultivated in baskets with fairly open bottoms, so as to allow the descending flower-spikes plenty of room. The plants should be re-basketed when they begin to grow.

***Trichopilia tortilis.***—This is a free-blooming and interesting plant, the blossoms not so large as in some other members of the genus. The sepals and petals are singularly twisted, bright brown, with a yellow margin, the lip white, with a crimson throat and many spots of the same tint in front. It is best grown at the cool end of the Cattleya house, and when the roots have obtained a good hold of the compost it likes plenty of water all the year round. It has a nice appearance grown in baskets suspended from the roof, but may also be planted in medium-sized pots if more convenient. It comes from Mexico and was introduced in 1835.

***Masdevallia racemosa.***—A nice plant of this species I noted this week is bearing three spikes, one of these having seven flowers. It is quite distinct from most other *Masdevallias*, the flowers a bright orange-erimson, with an overlying tint of scarlet. The habit is not so tufted as in the *Harryana* and similar sections, the stems occurring at a slight distance apart upon a creeping rhizome. For this reason a rather larger receptacle should be given, but it has the same dislike to a heavy, close compost as the other members of the genus. It is not a common plant under cultivation, though it has long been known

to botanists. It is known also as *M. Crossii*, but *M. racemosa*, as given by Lindley, is the correct name. Though discovered by Hartweg over half a century ago, it was only introduced to cultivation by Mr. Corder in 1883.—H. R.

**Cattleya Mendeli.**—This is one of the most refined-looking of the labiate Cattleyas, and it has a longer blooming season than many. The earliest plants are in flower in April, and a few plants here are just opening, so that it extends over three months. The sepals and petals are usually nearly pure white, the elegantly frilled lip having also a good deal of white about the side lobes. The centre is crimson, lined with purple, and an orange-yellow throat. The pure white form is one of the rarest and most beautiful of the albinos in this section, and it is named, in compliment to its discoverer, C. M. Blunt.

**Habenaria bifolia.**—Very beautiful and fragrant in the woods around here is this pretty Butterfly Orchid. It is seen at its best under the shade of Hazel and other coppices, the spikes being longer and the blossoms a purer white than when growing in more open positions. The spikes grow about 18 inches high, the upper portion covered with flowers each 1 inch across. It is a useful plant for naturalising in a fairly moist position shaded from the brightest sunshine. Any good loamy soil suits it, and it will thrive better for the addition of plenty of leaf-mould when planting and an annual mulch of the same material.—SUFFOLK.

**Odontoglossum Harryanum.**—A nice spike of a good form of this favourite plant comes from a correspondent, and I have also noted it in many collections recently. Some of the varieties have the bad habit of only half opening their flowers, but this is, I think, partly caused by weakness. *O. Harryanum* is an easily enough grown plant when once in good order, but once it gets into bad condition it is by no means an easy task to bring it back to health. The pseudo-bulbs are longer and more flowers are produced upon the spike when a little more heat than that of the coolest house is allowed. It is a native of Colombia, and was first imported by the late Mr. F. Horsman, of Mark's Tey.—R.

**Oncidium luridum.**—This is a useful and handsome member of the bulbous section of the genus, of which better-known examples are *O. Lanceanum* and *O. Cavendishianum*. The leaves are pale green, and from their base a flower-spike rises often to the height of 4 feet or 5 feet, clothed with flowers over a good portion of their length. The sepals, petals, and lip are all greenish yellow, the first almost covered with light brown blotches. There is also a form of it with prettily spotted flowers. It is a native of Jamaica and other parts of America, and does well in a light position at the warmest end of the Cattleya house. It does not take kindly to disturbance, and often fails to bloom after being repotted. This need not, however, be the case if the work is carefully done. Pick out the old material and replace with new, without taking the plants out of their pots until they have outgrown them, when a shift must be given. Plenty of water is needed while growing, much less sufficing while at rest.

**Dendrobium Farmeri.**—This is one of the latest to flower of the evergreen section, and a favourite plant among Orchid growers. Strong plants have pseudo-bulbs 18 inches and upwards in height, the rather loose racemes proceeding from the upper portion of these in the usual way. It makes a fine display in the flowering house if placed there just before the blooms open, and it lasts about a fortnight in good condition. In the typical form the sepals and petals are a pale yellow, the lip deeper in colour, with an orange disc; but there are many forms of it under cultivation, some having the outer segments tinted with rose, others a deeper yellow than the type, while others again are pure white. It does well with rather less heat than the deciduous section generally requires, and may, in fact, be grown in the Cattleya house all the year round. The plant begins to grow soon after the

flowers are past, when they may be repotted if this is necessary, using a compost of peat fibre and Sphagnum Moss in equal proportions. The pots may be a little larger than usual, owing to the roots being more fleshy and pushing farther from the centre of growth. It has a wide geographical distribution in India and Moulmein, and was introduced to this country in 1847.

**Nanodes Medusæ.**—This very singular and weird-looking plant was recently in bloom with Mr. Bull. The blossoms occur at the end of the pendent, ungainly-looking growths, and are chiefly remarkable for their long-lasting qualities and the purple, deeply-fringed lip. Botanically, this plant differs little from the *Epidendrums*, but its distinct growth and general appearance will always keep it separate as a garden plant. Its culture is by no means difficult, yet it is an extraordinary fact that in many cases plants treated for years under precisely similar conditions will be found to differ greatly in health and the amount of growth made. The usual mode of culture is to plant it in pans or baskets of rough peat and Moss, suspending these from the roof. If Tree Fern stems can be procured, they make a capital holding for it. Nearly all the year round plenty of water must be given, for it seldom rests long, one set of growths being little more than half grown sometimes when another one is produced. A light position not far from the roof-glass suits it well, and as it comes from Ecuador, not much heat is necessary. It was originally introduced by Messrs. Backhouse, of York, in 1837, and it flowered for the first time in England soon after in the collection of the late Mr. John Day.

#### CATTELEYA CRISPA.

ALTHOUGH this plant is strictly a *Lælia*, it is much better known as a *Cattleya*. The plants are just now commencing to bloom, each spike carrying about half a dozen large showy flowers, rather narrow in the segments, but very bright and effective. The growth is not so tall as that of *Lælia purpurata* and rather stouter, the flower-spikes appearing on the young bulbs as they attain maturity. It is a vigorous rooting plant, and delights in a rough make-up of material consisting of about equal parts of good fibrous peat broken into lumps as large as a hen's egg, and clean freshly gathered Sphagnum. Add to this a good sprinkling of rough lumps of pottery ballast or crocks and a little rough charcoal. The growth of large plants is rather straggling and untidy, and a good deal of care is required to make a nice shapely specimen of some of the newly-imported pieces that arrive in this country. It is quite impossible to avoid burying some of the bases of the older pseudo-bulbs, but this is of little consequence if plenty of new leads can be arranged on the surface. Keep these as near the centre as convenient, as the roots then stay in the compost, and by means of stout stakes and ties draw the stems into the required position or as near as possible. The best time to repot established plants is when the growths are getting well away in spring, as the roots that are at this time emitted from the rhizome give them a good hold of the new material. Without disturbing the plants more than can be helped take away all dead roots and decaying rhizomes, also any of the older peat that has become sour. Give a good shift and fix the new compost firmly and carefully with the dibber. The plants need not be elevated much, just enough to allow superfluous water to escape and the pots must be efficiently drained. Avoid checking the young shoots by taking the plants to a cold or draughty shed, and get them back to their growing quarters with as little delay as possible. This will be the warmest and lightest part of the Cattleya house. Rather more shade than usual may be allowed after repotting, as just at this time both old and young foliage is apt to suffer. Grow on strongly in a full Cattleya temperature and plenty of atmospheric moisture, taking care that no water is allowed to lodge in the sheath formed by the growing leaf. After blooming keep

the plants a little on the dry side, give all the air possible and keep them dormant until the spring. *C. crispata* is an old species in cultivation and was sent by Sir H. Chamberlain from Rio de Janeiro in 1826. It has a wide geographical distribution in Southern Brazil, this doubtless accounting for the variable character of the flower.

**Cypripedium callosum Sanderæ.**—In Baron Schröder's group at the Temple show was a very fine plant of this *Cypripedium* bearing two splendid flowers. The dorsal sepal has no tinge of purple, but is white with heavy veining of deep green, the petals similar in ground colour and the lip pale greenish with very fine venations. The foliage is lighter than that of the type, the whole plant in fact being a lovely combination of white and various greens.

**Anæctochilus Sanderianus.**—Judging by the healthy appearance of several plants of this species exhibited by Messrs. Sander and Co., it should be more free-growing than the majority of this section. The leaves are large, oblong, deep green in the centre, becoming a purplish tint towards the outer wavy margin, the whole delightfully reticulated with golden, green and silver veins, with the usual glossy surface. If as strong growing as it looks, it should be a decided acquisition.

**Lælio-Cattleya Hippolyte.**—Several plants of this pretty hybrid were recently in bloom at Messrs. Veitch's Chelsea nursery, where it was raised and first flowered some seven or eight years since. It is a distinct and pretty plant, the blossoms occurring from the top of the bulb and in shape like those of a small *Cattleya Mossiæ*. The sepals and petals are bright orange, with a slight suffusion of rose. The lip is yellow at the base, the front lobe reddish purple and slightly fringed.

**Lælia grandis tenebrosa.**—This was exhibited by several nursery firms at the Temple, but, taken as a whole, the varieties shown were not particularly good, judging by last season's form. The plant is too well known to need description, and probably we shall see it in better form as the season becomes more advanced. *L. grandis tenebrosa* is a strong-growing, easily-cultivated species that thrives well in the warmest part of the Cattleya house. It should be potted in very rough open material on account of the size of the roots, and requires abundance of water.

**Odontoglossum crispum Starlight.**—A good deal of interest was apparent at the Temple show in this unique form of *O. crispum*, which was exhibited by Mr. R. Brooman White, of Ardaraoch. The flowers are large, of excellent shape, the petals broad and crisped, of a rosy white, suffused with a deeper tint and very profusely spotted, the spots small and reddish brown. The lip does not differ materially from that of the ordinary forms, but the plant is perfectly distinct from any other known kind and bore a strong, many-flowered spike.

**Lælio-Cattleya Digbyana-Mossiæ.** There is not a more beautiful hybrid than this in cultivation, and though by now it is no novelty, its characteristic and striking appearance calls forth many encomiums wherever exhibited. Baron Schröder, of The Dell, had a fine plant in his group at the Temple recently, superbly grown and carrying a magnificent flower. The sepals and petals are a delicate rosy lilac, the lip rather deeper in ground colour. The throat has a yellow blotch in the centre, with streaks of crimson, a deeper streak occurring in front and leading to the prettily fringed rosy pink margin.

**Oncidium phymatochilum.**—Not only are the individual blossoms of this species very interesting and quaint-looking, but in the aggregate they make a very handsome show. This may now be seen at Mr. Bull's, several large spikes being in full beauty and others advancing for flower. It is a Brazilian plant, and may be grown in an intermediate or Cattleya house temperature. The pseudo-bulbs are each about 5 inches high, each bearing a large leaf, and the spikes rise to the

height of about 18 inches. The sepals are greenish yellow, lightly spotted, the front lobe of the lip white, the sides greenish, with spots of orange and brown.

**Oncidium olivaceum Lawrenceanum.**—In habit, shape and disposition of the blossoms this somewhat resembles *O. cucullatum*, but it is far superior as a garden plant. The spikes are longer and bear a large number of flowers, each about 1 inch across. The sepals and petals are very deep chocolate-brown, slightly incurving, the dorsal sepal hooded. The column is crimson-purple, the lip deep rose, heavily spotted with brown. It thrives well in the cool house, and may be potted in peat and moss. Several nice plants were recently in flower at Mr. Bull's.

**Oncidium pulchellum.**—This is one of the prettiest of the smaller-flowered *Oncidiums*, and I lately noted some very nice spikes at Mr. Bull's. These are about a foot long and very closely studded with flowers. The sepals and petals and the broad-spreading lip are all white, the latter with a rosy suffusion and a few pink spots about the bright yellow crest. *O. pulchellum* belongs to a section of the genus too little cared for, and including such as *O. elegans*, *O. tetrapetalum*, and others. It is a native of Jamaica, and should be grown in the Cattleya house in a light and fairly sunny position. The plant itself is only a few inches in height and consists of small leaves without any pseudo-bulbs.—R.

**Lælia purpurata Ashworthiæ.**—This is one of the most distinct *Lælias* ever exhibited. The sepals and lip were of the ordinary class and colour, but the petals were marked almost in the same manner as the lip, the colour being a deep crimson-purple that commences in radiating lines at the base of each, spreading until it almost covers the segments. It was remarked that the thing was a freak and would not occur again, but as it is not its first time of flowering this is hardly likely. Nor was there anything of a monstrosity about it, for the shape of the segments was perfectly normal, the colour only distinguishing it from an ordinary *L. purpurata*. The plant bore five pseudo-bulbs.

## CHRYSANTHEMUMS.

### A TABLE OF CHRYSANTHEMUMS.

HAPPILY now for the blooms of a high standard of excellence other uses than merely placing them upon an exhibition table are being found. This is a matter for congratulation, for while most growers value smaller blossoms cut from plants grown in a free manner, the majority of them would readily acknowledge the superiority of the large flowers for all kinds of bold and striking decoration. Such a fact cannot fail to give an impetus to the cultivation of high-class flowers.

As in all floral decorations, colour is one of the most important essentials. The more general use of large flowers for tables, sideboards, vases, &c., would result in many dowdy-looking and badly-coloured flowers being discarded in favour of others somewhat smaller, yet decidedly brighter in colour. There is one important fact to be remembered when arranging large *Chrysanthemums*, and that is unless the stems be almost entirely denuded of their foliage, the blossoms collapse in a comparatively short time. While blooms which have been treated in this way have kept in a fresh condition for some days, others not subjected to this treatment have succumbed in a few hours, especially in a hot and ill-ventilated room. This disadvantage in the loss of their own foliage may be overcome by the use of small fine-leaved plants in association with them. Plants such as *Cocos Weddelliana*, *Crotons*, *Eulalia japonica variegata*, small Ferns, *Pterises*, with an edging of *Isoplepis gracilis* and *Panicum variegatum* are

each exceedingly useful when arranged with a proper regard for colour effect. Then there are so many *Chrysanthemums* grown on single stems from late propagated cuttings and flowered in 5-inch and 6-inch pots. These are often used for the decoration of sideboards and other equally important positions, and as the foliage in this case has not to be interfered with, very little else is needed.

For table decoration, or for individual vases for the drawing-room or hall, the large flowers of the *Chrysanthemum* are seen to immense advantage. Fine bold-looking arrangements are generally appreciated, and are a welcome change from those in which smaller flowers have been in general use. Vases confined to one colour, or, if the selection be a limited one, those of such colours as will harmonise should be chosen, and in association with them quite a wealth of foliage with rich autumnal tints lends itself ad-

### CULTURAL NOTES.

To grow *Chrysanthemums* well they require plenty of room. Crowding is often a cause of indifferent blooms, a large number of plants being allowed to stand almost close together even when more space is available. I have noted such look well in the bulk; that is, the leaves become large and very green, but they are wanting in texture and the stems produced are likewise soft. Wood like this is not the kind to produce solid well-formed flowers. It must be firm and well ripened; then if it be not over-large, good results will follow. *Chrysanthemum* plants in single rows around the sides of walks are usually in a suitable spot, especially if this be not shaded unduly by trees, and if they are stood about a foot apart; all other things being attended to, we should expect satisfactory growth. Crowding, however, is most noticeable when a plot of ground is given up to their



A table of *Chrysanthemums* and foliage. From a photograph sent by Miss H. Vernon, Auchans House, Kilmarnock.

mirably to these arrangements. More particularly is this noticeable in the richly coloured flowers of yellow, orange, and crimson, the pink and white blossoms being seen to greater advantage with silvery-tinted foliage, and a few pieces of deeper and richer coloured copper shades.

Ideas in regard to floral arrangements are becoming changed, and there is good reason to believe that the handsome blooms of the *Chrysanthemum*, which at one time were rarely used in the house, will in the future be largely in demand for this purpose, thanks to the efforts of the leading exhibitors in their endeavours to prove the usefulness of large flowers for all kinds of decoration. One good result of the popularity of this system will be the retention in the lists of the *Chrysanthemum* specialists of a large number of varieties of good colour and most desirable form which for ordinary exhibition purposes are a trifle undersized.

D. B. CRANE.

summer culture. I would here insist upon the space of 5 feet to 6 feet between each row and quite 18 inches from pot to pot in the rows. There is then ample room not only to get among the plants for the necessary work, but air and light may pass freely about the leaves, and the growth becomes firm as it advances. The pots may be stood on boards. This is usually done to prevent the roots from wandering in the earth through the drainage hole, and thus causing a check when removed. One need not go to this trouble if the pots be turned occasionally throughout the summer, and a bottom of ashes is cooler—an item worth noting. It is not an easy matter to prevent the roots getting scorched at the sunny sides of the pots in very hot weather. I have known cultivators who have allowed the weeds to grow around them to provide a little shade, with some effect, although the presence of these is not taking to the eye.

Tie the central stems of the plants to sticks before they get long. The need of this has been apparent lately when rough winds have been so frequent. A large number of the lower leaves of my plants are blown off. This gives them a naked look for a time, but it is astonishing how quickly they recover when the elements are more favourable. I must say I do not view with apprehension the loss of a few of the lower leaves. Their work will have been finished long before the end of the season, and they are as well thinned out to allow a thorough ripening of the stem.

Tall-grown plants are still, I fear, one of the drawbacks of growing large blooms of Chrysanthemums, and no system of topping generally will make them more dwarf only at the expense of the blossom. I have more than once noted improvement in this direction, but some of the newer varieties are as ungainly in growth as the older sorts, discarded, perhaps, because of this habit. *Australie*, for instance, seems likely to have stems 9 feet high before the season is over, and *Mme. Carnot* is not a nice grower. *Pride of Madford*, *Phœbus*, *M. Chénon de Léché*, *Australian Gold*, and *Oceana* are among newer sorts with a taking habit of growth, and ample foliage of a dark green colour. Watering plants in pots requires more care than many appear to think and a great number of Chrysanthemums suffer in this respect. I feel certain giving too much moisture at the roots rather than not enough is often the cause of unhealthy plants. This over-watering is very likely to occur at the present time, just after the plants are placed in the flowering pots. I am a firm believer in keeping the soil on the dry side, at least until the same is completely filled with roots. In the case of the subject of these notes that is not likely to be yet, so that it is wise to be very cautious in the supply of water. I know watering Chrysanthemums is considered quite a daily item. That is to say, a supply is given almost regardless of the weather. Now, it occurs to me that during dull, sunless days, unless the wind is drying, there is enough moisture in the atmosphere to prevent the leaves from flagging; and at such times the roots are more likely to be moving in partially dry earth than in that in a sodden state. I would rather sprinkle the leaves than pour water on the roots during sunless weather. I should then expect to find roots coming to the surface for moisture. During bright sunshine the danger of over-watering exists in a far less degree and flagging of the leaves is then avoided. But not even then is it wise to water every plant at the same time. Go over the collection in the morning and deal with those quite dry at the roots. Then again at mid-day and in the evening take another round among the plants. The well-known practice of tapping the pots is a good one. A ringing sound usually indicates dryness at the root. But if a doubt exists, lift a pot, and its comparative weight will provide a very good sign of the condition of the earth. A cultural error to be avoided is not giving enough water at a time to thoroughly soak the whole ball of earth. Mere top moisture will not do; the bottom must be soaked as well. Then the mistake of applying manures too early is not uncommon. Stimulants are not necessary at the time roots have ample fresh earth to run in. To give fertilisers then is a sure means of either unhealthy or soft growth. When stimulants may be given depends upon the time the plants are potted and the size of the pots used. If the plants are growing freely and the foliage healthy in tone, we may be sure proper food is being supplied in abundance. When the pots are well filled with roots the leaves quickly put on a starved

look, and then is the time to begin feeding. Towards the end of July is usually a very good time. H. S.

### THE LANDSCAPE GARDENER AND HIS WORK.

HAVING been frequently exasperated by the use in American writings of the term *landscape architect* and *landscape engineer*, we see with much pleasure a protest against the use of these terms by Mr. O. C. Simonds, of Chicago, in an article which in other respects is interesting and true. Even our old friend Meehan, of Philadelphia, has described himself somewhere as a "landscape engineer" as a word a curious hybrid and in idea horrible.

The term "landscape gardener," instead of "landscape engineer" or "landscape architect," is used here because it is believed by the writer to be the most suitable to convey the meaning intended. When one considers engineering in connection with landscapes, instead of thinking of any artistic result, he is more apt to think of the road scars along mountain sides, of the destruction of beautiful scenery along river banks, of the changing of watercourses into sewers, of railway embankments, canals and dams. The term "architect" brings to mind a man who aims to design structures. His materials are stone, brick, the various metals, wood, glass, paint, &c. On the other hand, the term landscape gardener has first, "landscape," which as defined by Hamerton must necessarily be an artistic portion of the earth's surface, and then "gardener," which indicates that the materials used will be those found in a garden or in Nature.

What are the attainments of a skilful landscape gardener? His art applies to any outdoor scenery which can be affected by the hand of man. It is of the first importance, therefore, that he know how to arrange the ground surface, the trees, shrubs, and other plants, the ponds and streams, the points of view and the open spaces or vistas, so that the general effect will be beautiful. No matter how great his knowledge of soils, of drainage, of road construction and of the structure and characteristics of the various species of plants may be, if he fails to make an artistic arrangement he is not a landscape gardener.

Next in importance to a knowledge of arrangement comes the ability to produce a result which, with a reasonable amount of attention, will continue to improve with added years of growth. This ability will rest in part on an acquaintance with the habits and life history of the plants used and of the situations to which they are adapted. The points of view will require a study of the relations of buildings, drives and walks to the landscapes. Where the landscape is an important feature the landscape gardener should work with the architect in the preparation of the preliminary sketches. Unfortunately, architects frequently design residences and other buildings without any regard to the site and the characteristic features which may have attracted the owner. Cases are not unknown where houses have been so designed and placed that the kitchen and servants' rooms shut off the very best views from the family living rooms. A landscape gardener should place his drives where they will command good views while not interfering with the landscape, and he should know how to place them so they will be convenient, have easy grades and proper drainage and how to construct them in a durable manner with a satisfactory wearing surface. He should know how to economise in regard to space and cost of the work coming under his direction. While he should have no pecuniary interest in any work that is carried on—that is, should have no interest in any nursery or nursery stock, or act as agent for any firm—he should usually purchase the material furnished by nurserymen on account of his knowledge of what is required, of the prices that should be paid, and the standing of the various

nursery firms. He will often be able to save an owner several times the amount of his fees by his knowledge of the value of plants.

His work should commence with a study of the value of a given piece of ground for the purpose intended, especially when that purpose is the making of a park, a botanic or public garden, home grounds or airy roadway. The ground in question may have features which would be of great importance in the design to be worked out, such as an important view of a large body of water, a valley or a distant stretch of country, a grove of our native trees or woodland, a rocky ledge, a steep bluff or a ravine, or it may lack beauty which could be secured by the selection of another piece of ground. When the site is finally selected a thorough study should be made of its characteristic features and of all the surroundings, and after such study the landscape gardener should have a clear conception of the effect he means to produce, of its appearance when the first planting shall have been done when years have elapsed. Not only that, but he should have in his mind the various effects of spring, summer, fall and winter.

Having made his design and perhaps sketched it on paper ("perhaps," because a sketch is not always necessary, and there are cases in which the best result will be produced by working directly on the ground), he proceeds to execute it just as his brother artist proceeds to paint a picture. He has 10,000 servants to help him. If he wishes a dark green carried up from a given place on the ground he chooses a Maple, or if the green is to continue through the water he chooses a Pine as his servant to gather the materials already found or placed in the ground. If he wishes a red in winter he chooses a Dogwood, which will put this colour in its bark, or if he wishes a red in summer he chooses a Rose. To be sure the servant must breathe the surrounding air while doing the work required. By choosing the right number and kind of such helpers a great mass of colour may be carried high into the air or spread out on the ground like a carpet. The colours may be varied from time to time, or bits of one colour may be scattered upon another. Choosing the right servants is not always an easy task, but each one performs with marvellous skill the work he or she is able to do. Whether the living picture, as a whole, will be satisfactory or not will, however, depend upon the choice made by the landscape gardener, provided his supervision is continued for a long enough time. The continued supervision is required because it takes time—in some cases years—for the servants mentioned, the various trees, shrubs, vines and herbaceous plants, to do their part in making the picture. Few of the members of the profession, to say nothing of the clients, appreciate the importance of an oversight extending through a series of years. The architect's work is finished with the completion of a building; the painter's when he puts his last touches on a canvas, but what a landscape gardener must have in mind is not a single picture, but a series of pictures having more or less resemblance to each other, changing more rapidly with the first than with the later growth, and needing from time to time the inspection and criticism of a trained eye. This inspection may be made by visiting a place once a year, once a month, or even more frequently, as may be agreed on with the client, but it should not be omitted.

What compensation will a landscape gardener receive for his work? In the first place, he will enjoy the beauty of Nature far more than most men. He will also get much pleasure from his work. He will have a chance to get the pure, clear air of the country, to take walks through the woods and over fields. These are important considerations, but he must also receive money and have a basis for his charges. It takes as much natural ability and as much time spent in study to become proficient in his profession as it does to become a good lawyer, a good physician, a good engineer, or a good architect, and his pay should equal theirs. Moreover, he must travel and see what others have done in other cities and

countries, and he should give special attention to what Nature has done. This requires both time and money. The percentage charge made by architects is not applicable to landscape work. A fee determined by an estimate of the time required in making a design is usually most satisfactory, or an arrangement may be made to charge a certain amount by the day, the month or the year. The subsequent supervision should be a separate matter from the original design and execution of the work. If an agreement for a given amount per year is made for supervision, the landscape gardener will feel more free to inspect the work as often as he may deem advisable than if he charges for each visit. His income should increase with his skill and experience, just as that of a lawyer increases when his ability is demonstrated by his practice, or the charges of a painter increase when the critics recognise the merit of his productions.

In conclusion, it may be well to state that the best result will only be attained when the client has an intelligent appreciation of what is aimed at by the landscape gardener, and is in full sympathy with him.—*Park and Cemetery.*

## TREES AND SHRUBS.

### SPIRÆA FLAGELLIFORMIS.

THE subject of the accompanying illustration is one of the most distinct of the Spiræa family, the form of its long slender shoots, studded with thickly-set rosettes of white blossom, being well depicted in the illustration. Some of these curving shoots are a yard in length, whilst others branching thickly show palmate surfaces of blossom. Though growing more rapidly when planted in the neighbourhood of water, moisture is not so indispensable for this Spiræa as for others of the family, proof of which is afforded by the specimen here illustrated, which is evidently in rude health, though situated in a position that would at first sight appear to be particularly ill-adapted to the wants of a Spiræa, for it is planted in light, shaly soil on the steeply-sloping bank of the river Dart, hard by its entrance to the sea, fully exposed to the south, though sheltered from the north and east. In the same garden are many rarities that are at home in the shelter afforded by the lie of the land and in the warmth engendered by the proximity of the sea, the nature of the soil and the southern sunshine. Here *Acacia dealbata* grows and flowers well. *Embothrium coccineum*, *Eucalyptus globulus*, *Dracenas*, *Palms* and other sub-tropical subjects find the conditions suited to their requirements, but that *Spiræa flagelliformis* should have appreciated like conditions would scarcely be credited did not the photograph taken during the arid summer of last year give evidence of its luxuriance and prove that this Spiræa may be grown successfully in many positions that would be quite unsuited to others of the shrubby section, such as *S. arifolia* and *S. Lindleyana*. In the present year this specimen promises to excel its display of the preceding summer, showing that it has not suffered materially from the long-existing drought of 1896. *Spiræa flagelliformis* has many synonyms, of which the most common is *S. canescens*. S. W. F.

**Escallonia Phillipiana.**—The bulk of the Escallonias only succeed really well when they are grown on a wall or in those parts of the country like Devon and Cornwall where many things that are only half hardy near London flourish in full

exposure. The great value of *E. Phillipiana* consists in its being hardier than any other species, thriving perfectly, as it does, in the open in the London district. It is, moreover, very distinct, and both in its flower and mode of growth quite different from the others. Its leaves are quite small—half an inch to three-quarters of an inch long—almost without stalks, quite smooth and faintly toothed at the edges. The flowers also are small (from one-third of an inch to half an inch in diameter), pure white, but borne in the greatest profusion. The whole plant has a curious resemblance to the Australian myrtaceous shrub *Leptospermum scoparium* both in its leaf and flower. Many of the main branches are long, slender, and more or less pendulous. At the present they are cylindrical masses of white blossom, and the shrub, indeed, is one of the most beautiful of those that flower in late June and July. It is a native of Valdivia, and was originally sent home about a quarter of a century ago by Pearce, who was then collecting for

3. *L. palustre* (syns., *L. angustifolium*, *L. longifolium*, *L. odoratum*). North Europe, North Asia, and North America.

The "Kew Index" includes a fourth specific name—*L. californicum*—the original description of which appears in the "Proceedings of the Californian Academy" for the year 1863, and is by Dr. Kellogg. Judging from it (but in the absence of specimens or further information) it is most likely a form of *L. glandulosum*, which is a native of California. *L. latifolium* and *L. palustre* have been in cultivation for more than 130 years, but the other, *L. glandulosum*, is quite a new introduction to this country, and the fact of its having flowered at Kew for the first time a few weeks ago may be made the opportunity of passing it and its two fellow species in review. They belong to the Heath family, and, like many of their allies, are notable for their rounded, compact habit and



*Spiræa flagelliformis.* From a photograph sent by Mr. S. W. Fitzherbert, Lonscombe House, Torquay.

Messrs. Veitch. It can be propagated from cuttings put in during August.—W. J. B.

### LEDUMS.

JUDGING by the number of names that have been given to the Ledums, one might conclude that the genus was quite an extensive one. There are, however, but three species in cultivation, and these, so far as I can ascertain, make the total number of species known and discovered. They are, at any rate, the only ones represented in the herbarium at Kew. Their names and commonest synonyms are as follows:—

1. *L. glandulosum*. West North America.
2. *L. latifolium* (syns., *L. canadense*, *L. groenlandicum*). North America and Greenland.

the freedom with which they flower. They are evergreen, and the flowers are white; whilst always of low stature, they are sometimes even prostrate. They inhabit the swamps and marshes of the cool temperate and arctic regions of the three northern continents, and under cultivation should be given a peaty soil deep enough to be permanently cool and moist. They ripen seeds freely in this country, and these afford a plentiful though not very quick means of increase. Propagation can, however, be also effected by layers.

**L. GLANDULOSUM.**—It is curious that a shrub like this, which is evidently as handsome as any of the Ledums, should so long have remained unknown to English gardeners. It was described over fifty years ago by Nuttall, the American scientist, and has several times been collected for

herbaria since then, but it was not until 1894, when Professor Sargent sent seeds of it to Kew, that the species was introduced to this country. These young plants have this year flowered very prettily and the species promises to have all the beauty of the two older species. It is a Western North American shrub, being found in California, British Columbia, &c., but not on the eastern side of the continent. From the other two species this is quite distinct, chiefly by reason of the foliage. The leaves are ovate, each from three-quarters of an inch to nearly 2 inches in length, glossy green above, and the slightly glaucous under surface is dotted with small, flat glands to which the specific name refers. Of the soft rusty coloured wool which is so prominent a feature beneath the leaves of the other two species there is no trace in this, and, except for a few hairs when quite young, they are glabrous. Neither have they the revolute margins seen in the others. The flowers are each three-quarters of an inch in diameter, pure white and each has ten stamens; they appear in terminal clusters 2 inches to 3 inches across. Wild specimens are described as growing from 2 feet to 6 feet high, and the species is therefore considerably taller-growing than either of its fellows. Already the small plants at Kew give indications of a quicker growth and more open habit. As a new addition to the peat-loving American plants, this is certainly one that merits notice from those interested in that beautiful class of shrubs.

**L. LATIFOLIUM.**—From *L. palustre*—to which it is nearly allied—this species can be distinguished by its broader leaves and by each flower having five to seven instead of ten stamens. The seed vessels are also slightly different in shape. It has not such an extended distribution, being found chiefly in North America, where it reaches from Newfoundland southwards to Oregon. It exists, however, in Greenland also. The leaves are narrow oblong, usually from 1 inch to 2 inches long, sometimes as much as 2½ inches long by three-quarters of an inch wide; the margins are curled under as in *L. palustre*, and the lower surface is covered with the same rusty-coloured wool. The flowers are each half an inch to three-quarters of an inch across, white, and produced during May in dense corymbose clusters at the ends of the shoots. As a garden plant it is preferable to *L. palustre*, the larger foliage improving its appearance. In spite of the differences mentioned above, this species and *L. palustre* come so near each other that more than one authority has made them forms of the one species. *L. latifolium* globosum is a variety with exceptionally large and globular flower-trusses.

**L. PALUSTRE.**—This is by far the most widely spread in a state of nature of any *Ledum*, encircling the entire globe at high latitudes and penetrating within the Arctic Circle. It is equally common in North Europe, Siberia and Japan, and it spreads from east to west of the northern parts of North America. It has been found wild in Perthshire. It is a densely leafy bush from 1 foot to 2 feet high, the leaves being the narrowest of the *Ledums*, and varying from half an inch to 1½ inches in length. In the far northern latitudes the leaves are sometimes no more than one-sixteenth of an inch wide. The margins are always curled under, and the lower surface is covered with a reddish soft wool. The flowers appear during May, closely set in terminal clusters, each flower about half an inch in diameter. The stamens are ten in number, and this is the chief character that distinguishes the species from the nearly allied and very similar *L. latifolium*. A common name for this species is Labrador Tea, on account of its leaves being infused and used as a substitute for tea. *L. latifolium* is employed for the same purpose, but this is preferable.

**L. P. VAR. DILATATUM** is a Japanese form distinguished by its leaves being oblong-oval, and thus larger and broader than those of the ordinary *L. palustre*, and more like those of *L. latifolium*.

**L. P. VAR. DECUMBENS** is a prostrate form with very small, narrow leaves, and comes from the

most northerly regions reached by the species, but there is every gradation between it and the ordinary form.

W. J. BEAN.

## SOCIETIES AND EXHIBITIONS.

### CRYSTAL PALACE ROSE SHOW.

JULY 2.

A LARGE and beautiful show was brought together on this occasion, certainly larger and better than has been seen for the past two or three years. Competition was in most classes tolerably keen, and the average merit of the exhibits decidedly good.

#### NURSERYMEN.

In division A the first prize in the class for seventy-two single trusses was won by Messrs. Harkness and Sons, Hitchin, for a magnificent collection of blooms, fine in form and condition, the best being Comte de Raimbaud, Marie Baumann, Mme. Eugène Verdier, Earl of Dufferin, Prince Arthur, Kaiserin Augusta Victoria, Comte de Ludre, Marie Rady, Mme. Delville, Victor Hugo, Crown Prince, The Bride, Duke of Edinburgh, Marie Verdier, Camille Bernardin, Xavier Olibo, Cath. Mermet, S. M. Rodocanachi, Marquise de Castellane, Thomas Mills, Helen Keller, A. K. Williams, Chas. Lefebvre, Francois Michelin, Dupuy Jamain, Duc d'Orleans, Mme. Montel, Gustave Piganeau, Horace Vernet, Mrs. John Laing, Mrs. Paul, Dr. Andry, Capt. Hayward, and Fisher Holmes. Mr. B. R. Cant was a good second, showing fine blooms of Horace Vernet, Duchesse de Morny, Camille Bernardin, Countess of Oxford, Dupuy Jamain, Marie Verdier, Comte de Ludre, Alfred Colomb, Mme. Hoste, Victor Hugo, Princess of Wales, S. M. Rodocanachi, Duke of Wellington, Lady Helen Stuart, Beauty of Waltham, Ulrich Brunner, General Jacqueminot, Mme. Cusin, Prince Arthur, Mme. Eugène Verdier, Gustave Piganeau, A. K. Williams, Xavier Olibo, Jean Souperet, and Annie Laxton. For forty varieties distinct, three trusses of each, the first went to Mr. B. R. Cant, of Colchester, for an exhibit of very high merit, wonderfully even in quality throughout, many of the blooms being quite perfect in form and condition. The best were A. K. Williams, Marquise Litta, Ulrich Brunner, Mme. Cusin, three superb blooms, Helen Keller, Marchioness of Dufferin, S. M. Rodocanachi, Mme. Gabriel Luizet, Gustave Piganeau, Horace Vernet, three perfect flowers, and Mrs. Sharman Crawford. Messrs. Harkness and Sons, Hitchin, won the second prize with a remarkably good collection, but not so uniform as the preceding. The best varieties were Ulrich Brunner, superb blooms; Francois Michelin, Helen Keller, Earl of Dufferin, Camille Bernardin, Gustave Piganeau, Marquise de Litta, Horace Vernet, Comte de Raimbaud, Caroline Testout and Mrs. W. J. Grant. For forty-eight singles, the first prize went to Messrs. J. Townsend and Sons, Worcester, for a beautifully clean lot of blooms, the best being Catherine Mermet, Gustave Piganeau, Prince Arthur, La Duchesse de Morny, Marquise Litta, Comte de Raimbaud, Duke of Edinburgh, Marie Verdier, Camille Bernardin and Dupuy Jamain. Messrs. J. Burrell and Co., Howe House, Cambridge, won the second prize with an almost equally good exhibit, containing fine blooms of Innocente Pirola, La France, Duke of Wellington, Ethel Brownlow, Xavier Olibo, Mrs. W. J. Grant, A. K. Williams, The Bride, S. M. Rodocanachi, Earl of Dufferin and Mrs. John Laing. Mr. C. Turner, Slough, was an easy first for twenty-four singles, showing a very fine set of blooms, among which Victor Hugo, Mrs. J. Laing, Marie Baumann, Pride of Waltham, Ulrich Brunner, Mons. E. Y. Teas, Fisher Holmes, Ernest Metz and A. K. Williams were strikingly good. The second went to Mr. John Mattock, New Headington, Oxford, for another very good box containing Horace Vernet, Ulrich Brunner, Duke of Wellington, Victor

Hugo, Duke of Connaught and Marie Baumann. For twenty-four distinct, three trusses of each, the first prize went to Messrs. D. Prior and Son, Colchester, for an exhibit of high merit, the blooms being large, well formed and of splendid substance. The finest kinds were Horace Vernet, Ulrich Brunner, Caroline Testout, Marie Finger, Gustave Piganeau, Mrs. John Laing, Abel Carrière, A. K. Williams, Mrs. Sharman Crawford and La Rosière. The second prize was awarded to Mr. G. Mount, of Canterbury, who had lovely blooms of Fisher Holmes, Ulrich Brunner and Mrs. John Laing. The next class was for twelve distinct singles of varieties sent out by Messrs. A. Dickson and Sons, Co. Down, Ireland, and the first prize was won by Messrs. Harkness and Sons, whose box contained beautiful blooms of Mrs. W. J. Grant, Earl of Dufferin, Helen Keller, Jeannie Dickson and Ethel Brownlow. Mr. B. R. Cant, of Colchester, was a good second with Mrs. Sharman Crawford, Ethel Brownlow, Jeannie Dickson, Margaret Dickson and Marjorie.

#### AMATEURS.

For thirty-six single trusses, Mr. E. B. Lindsell, Bearton, Hitchin, was first with a remarkably good and even exhibit, with hardly a poor bloom. The best were Ulrich Brunner, Marchioness of Dufferin, Gustave Piganeau, Catherine Mermet, Mme. Hausman, Mme. Cusin, Alf. Colomb, Mme. de Watteville, Mme. Hoste, Muriel Grahame, Innocente Pirola, Horace Vernet, Mrs. Grant, Duc d'Orleans, and Mrs. John Laing. Mr. C. J. Grahame, Wrydelands, Leatherhead, was a good second, having fine blooms of White Lady, Chas. Lefebvre, A. K. Williams, Prince Arthur, Horace Vernet, Victor Hugo, Mrs. W. J. Grant, and Duke of Wellington. In the class for thirty-six distinct, single trusses, Mr. E. B. Lindsell was again first, showing good flowers of Capt. Hayward, Horace Vernet, Gustave Piganeau, Prince Arthur, Ulrich Brunner, Dr. Andry, Mme. de Watteville, and Louis van Houtte. Mr. Thos. Hobbs, Easton, Bristol, was a close second, S. M. Rodocanachi, La France, Her Majesty, Le Havre, Mrs. John Laing, and Star of Waltham being the best. Mr. E. B. Lindsell was first also for eight distinct trebles, his best kinds being Mrs. Grant, Ulrich Brunner, Mrs. J. Laing, A. K. Williams, and Horace Vernet. The second was awarded to Rev. J. H. Pemberton for good blooms of A. K. Williams, Horace Vernet, Mrs. J. Laing, Francois Michelin, and Comte Raimbaud. For twelve singles of any Rose, except Tea or Noisette, the first went to Mr. H. V. Machin, Worksop, for Gustave Piganeau, and the second to Mr. J. Gurney-Fowler for Caroline Testout. The first prize for twenty-four distinct singles went to Mr. S. S. Berger, Stevenage, for a charmingly coloured and shapely set of blooms, including Prince Arthur, Mme. Gabriel Luizet, Belle Siebrecht, Comte Raimbaud, Duke of Edinburgh, and Duke of Wellington. Mr. Edward Mawley, Rosebank, Berkhamsted, was an excellent second with beautiful flowers of Duke of Fife, Ulrich Brunner, Dupuy Jamain, Alf. Colomb, and Marie Finger. Mr. O. G. Orpen, Colchester, was easily first for nine singles of any Rose except Tea or Noisette, showing a box of very lovely blooms of K. A. Victoria. Mr. E. M. Bethune, Ilorham, was a close second with a very uniform box of Marie Baumann. For six trebles, distinct, Mr. E. Mawley, Rosebank, Berkhamsted, was first with a splendid collection, showing Marie Finger, Dupuy Jamain, Ulrich Brunner, Mme. Gabriel Luizet, Horace Vernet, and Mrs. John Laing. The second went to Mr. P. Burnand, Hill Grange, Reigate, his exhibit including good examples of Innocente Pirola, Mme. Cusin, and Duke of Edinburgh. For nine distinct singles, Mr. G. Moules, Hitchin, gained the first prize with very fine blooms of C. Raimbaud, Souvenir d'Elise, Beauty of Waltham, Her Majesty, Catherine Mermet, Ulrich Brunner, Francois Michelin, Earl Dufferin, and Caroline Testout. Mr. M. W. Little, Leicester, was second, having good specimens of S. M. Rodocanachi, Mme. Hoste, and Mrs. J. Laing. Mr. G. W. Cook, North Finchley, was successful for

six trebles, having Capt. Hayward, Mrs. John Laing, and La France in fine condition. Mr. R. H. Langton, Hendon Hill, won the second prize. For six singles, distinct, Mr. R. Foley Hobbs, Worcester, was first, his exhibit containing fine specimens of Ulrich Brunner, S. M. Rodocanachi, and Ernest Metz. Mr. R. W. Bowyer, Hertford, was a very close second, having Caroline Testout, Marie Baumann, and K. A. Victoria. In another class for six distinct singles, Mr. A. Munt, Slough, was first with very beautiful flowers of The Bride, Ernest Metz, K. A. Victoria, and Innocente Pirola. Mr. E. R. Smith, Muswell Hill, being second. Mr. H. P. Landon, Brentwood, was placed first for four distinct trebles, showing Victor Hugo, La France. Mrs. John Laing, and Caroline Testout; Mr. J. Parker, Old Headington, was second. For twelve distinct singles, the first went to Mr. W. Kingston, Bedford, who had good blooms of A. K. Williams, Ulrich Brunner, Camille Bernardin, and Alf. Colomb. Rev. A. Cecil Johnson, Ipswich, was a very good second. For six single trusses of any Rose except Tea or Noisette, Mr. G. W. Cook, North Finchley, was first with a beautiful box of Mrs. John Laing, Mr. J. Cobden Trueman being second with Her Majesty. Mr. E. B. Lindsell was first for six distinct singles of varieties sent out by Messrs. A. Dickson and Sons, showing Mrs. Crawford, Earl Dufferin, Muriel Grahame, and Helen Keller in good form. Rev. J. H. Pemberton was a close second. In another class for six distinct singles, Rev. A. Cecil Johnson was first and Mr. J. Cobden Trueman second, both lots being good. Mr. S. S. Berger gained the first prize in yet another class for six singles, while Miss Jebb, of Rotherham, was second. Mr. G. W. Cook was a splendid first for six singles grown within eight miles of Charing Cross, showing Duke of Wellington, Caroline Testout, Capt. Hayward, Mrs. John Laing and La France in good style, Mr. Jno. Bateman, Archway Road, was given the second award. For six distinct single trusses of new Roses, Rev. J. H. Pemberton was successful, showing good blooms of Capt. Hayward and Marquise de Litta. Mr. O. G. Orpen was second. The latter exhibitor was first for eighteen distinct Teas and Noisettes—a very beautiful collection, every bloom faultless. The best were Catherine Mermet, Medea, Maman Cochet, Cleopatra, Mme. Cusin, Ernest Metz, Maréchal Niel and The Bride. Mr. C. J. Grahame was second also with a very fine exhibit, his best blooms being Ethel Brownlow, Catherine Mermet and Mme. Cusin. For twelve distinct singles in the same division, Mr. E. M. Bethune, Horsham, was a splendid first, showing Catherine Mermet, Bridesmaid, The Bride, Caroline Kuster, Mme. Cusin, Marie Van Houtte, Ethel Brownlow and Maman Cochet among the best blooms. Rev. Hugh Berners was a good second. Mr. C. J. Grahame was successful for eight distinct trebles, having a clear and uniform exhibit, including Catherine Mermet, Innocente Pirola, Mme. Cusin, Maman Cochet, The Bride and Francaise Kruger. The second went to Mr. S. P. Budd, of Bath. For nine singles of any one variety, Mr. E. M. Bethune was first with a nice box of Catherine Mermet, and Mr. C. J. Grahame second with Mme. Cusin. For twelve distinct singles, Mr. J. Parker gained the highest award, his box containing excellent blooms of Anna Ollivier, Princess of Wales, Mme. Cusin and Mme. Hoste. Rev. J. H. Pemberton was second. Miss Baker, of Reigate, was successful for nine distinct singles, her best blooms being Jean Ducher, Maman Cochet, Ernest Metz and Etoile de Lyon. Mr. P. Burnand was an excellent second. Rev. A. Cecil Johnson, of Ipswich, was first in the next class for nine singles, with fine flowers of Cleopatra, Mme. Cusin and The Bride. The second went to Mr. G. Moules. Rev. F. R. Burnside gained the first for six distinct singles. For four distinct trebles, Mr. J. Parker was a capital first, showing Marie Van Houtte, Catherine Mermet, The Bride and Mme. Cusin. Mr. R. Foley Hobbs gained the first for six singles of one variety with a good box of Catherine Mermet.

A very lovely exhibit was that of Mr. O. G. Orpen, who won the first for six bunches with seven trusses to a bunch. Every variety was remarkably good, but the best were Anna Ollivier, Marie Van Houtte, Mme. Hoste, and Mme. Cusin. For eighteen bunches of garden Roses, distinct, Mr. W. V. Machin was first with fine bunches of Perle d'Or, Laurette Messimy, Mignonne, Macrantha, Crimson Rambler, Marquis of Salisbury, Cecile Brunner, Homère, and Bardou Job. Mr. A. Tate, Leatherhead, was a very excellent second, his best bunches being Laurette Messimy, Gloire Lyonnaise, Rosa Mundi, Bardou Job, Gustave Regis, Perle d'Or, L'Idéal, and W. A. Richardson. The bunching and arrangement were far superior to those of the former exhibit. Mrs. A. E. Perkins was first for six bunches of garden Roses, distinct, and had a very splendid exhibit, comprising Marquis of Salisbury, Mme. Pernet-Ducher, and Mme. C. Guinoiseau.

#### OPEN CLASSES.

For twelve bunches, distinct, of any variety, Mr. John Mattock was first, his best bunches being Marie Van Houtte and Innocente Pirola. For twelve single trusses of any yellow Rose, Mr. George Prince was successful, showing a very beautiful box of Comtesse de Nadailac, very fine in form and rich in colour. Messrs. D. Prior & Son were given the first for twelve Hybrid Teas, having a grand lot of blooms, including K. A. Victoria, White Lady, and C. Testout. Messrs. Harkness and Sons were first for twelve singles of any dark crimson, showing a fine set of Horace Vernet. Messrs. A. Dickson and Son were first for twelve single trusses of any new Rose, showing a magnificent lot of Mrs. W. J. Grant. For twelve singles of any crimson Rose, Messrs. Dickson were again successful, having a fine box of A. K. Williams. Mr. B. R. Cant gained the first for twelve singles of any Tea or Noisette with a charming box of Mme. Cusin. Messrs. Townsend and Sons were first for twelve singles of any light Rose, sending a box of splendid blooms of Mrs. J. Laing. For twelve single trusses of new Roses, distinct, Messrs. Dickson, Co. Down, were first with Mrs. Mawley, Ulster, Lady Clannorris, Tom Wood, Countess of Caledon, Killarney, Eileen, Mrs. W. J. Grant, Alex. Dickson, Bessie Brown, and Mrs. Grahame. For three single trusses of any new seedling Rose or distinct sport, a gold medal was awarded to Messrs. A. Dickson and Sons for a finely shaped pink Rose called Ulster. For thirty-six bunches of garden Roses, distinct, the first prize was won by Messrs. Paul and Son, Cheshunt, their best bunches being Mme. Falcot, Perle d'Or, Gallica, Georges Pernet, White Pet. Alistair Stella Grey, Bardou Job, Moss Blanche Moreau, Gloire des Polyanthas, Mme. P. Ducher, Marquis of Salisbury, Ma Capucine, and W. A. Richardson. For eighteen bunches of garden Roses, Mr. Chas. Turner, Slough, was first with good bunches of Bardou Job, Laurette Messimy, Hebe's Lip, Mme. P. Ducher, Crimson Rambler, and Gloria Mundi. For nine bunches of single-flowered Roses, Messrs. Cooling, of Bath, were a good first. For twelve distinct trebles (nurserymen), Mr. G. Prince was first, his best varieties being Ethel Brownlow, Mme. Cusin, Maman Cochet, Alba rosea, Ernest Metz, Anna Ollivier and Catherine Mermet. In the same division Messrs. J. Burrell and Co. were first for eighteen distinct singles, the best being Mme. de Watteville, Ernest Metz, Catherine Mermet, Jean Ducher, Bridesmaid and Mme. Cusin. For twenty-four distinct singles, Mr. Frank Cant was first with a very fine exhibit, including Maman Cochet, Ethel Brownlow, Ernest Metz, Jean Ducher and Medea. The silver medal for the best bloom of any Rose other than Tea or Noisette, exhibited by a nurseryman, was won by Messrs. Harkness for a bloom of Horace Vernet. The similar award for the best bloom of any Tea or Noisette was gained by Mr. B. R. Cant for a flower of Mme. Cusin. A like award for amateurs was given to Mr. E. B. Lindsell for a bloom of Muriel Grahame. The silver medal for the best bloom other than Tea or Noisette,

grown by an amateur, went to Mr. O. G. Orpen for K. A. Victoria.

#### MISCELLANEOUS.

Exhibits under this section were also very numerous and good. Messrs. Wallace, of Colchester, again had a beautiful group of hardy flowers, chiefly Lilliums and Calochorti, arranged with excellent effect. Among the Lilliums the following were conspicuous: L. Hansoni, L. Parryi, L. dalmaticum and L. canadense. The collection of Calochorti included the usual varieties which have been lately shown, C. venustus citrinus being again very beautiful, also the lighter-coloured forms of the same strain. Other notable things were Hemerocallis aurantiaca major, with remarkably large blooms, and Iris aurea. Sweet Peas were again beautifully shown by Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants, such varieties as Royal Rose, Mrs. Gladstone, Daybreak, Brilliant, Countess of Radnor and many others equally good being shown in fine form. A very pretty group of hardy flowers was staged by Messrs. A. W. Young and Co., Stevenage, Herts, and contained a great variety of beautiful Campanulas, a good collection of Digitalis, the old-fashioned, but charming Sweet Williams and Shirley Poppies. Mr. M. Pritchard, Christchurch, Hants, had a small, but very good group of hardy flowers, among which were some fine blooms of Iris Kämpferi, a bunch of large flowers of Chrysanthemum maximum, and a number of very lovely Potentillas. Yet another attractive collection of hardy flowers and shrubs shown by Messrs. Cheal and Sons, Crawley, included some good Roses and some charming Tufted Pansies. A very extensive and handsome exhibit was arranged by Messrs. J. Laing and Sons, Forest Hill. It consisted of a superb collection of tuberous Begonias, backed with choice Palms and flanked on each side with a group of splendidly grown and coloured Caladiums, and extended in one direction with a very representative collection of hardy flowers. The arrangement was throughout very effective. A few good plants of Malmaison Carnations were noticeable.

A large group of Roses, very rich and varied in effect, was arranged by Messrs. Wm. Paul and Son, Waltham Cross, and comprised fine examples of cut blooms, standard trees, and dwarf bushes. Among the best varieties were White Lady, Belle Siebrecht, Mme. Hoste, Spenser, Gloire Lyonnaise, Roberta, and Grand Duc de Luxembourg, all these being effectively massed in baskets. There were also good blooms of Empress Alexandra of Russia, Queen Mab, and Xavier Olibo, and a good collection of Briers and garden Roses. Another nice collection of cut Roses came from Messrs. Geo. Jackman and Son, Woking, Surrey, and in it button-hole Roses were particularly attractive, such varieties as W. A. Richardson, Rêve d'Or, Mme. Falcot, Mme. Lacharme, l'Idéal, and Perle d'Or being very lovely. Messrs. Geo. Bunyard and Co., Maidstone, sent five boxes of twenty-four blooms each, with some excellent flowers among them. The following were the best: Capt. Hayward, Caroline Testout, Mme. G. Luizet, Gustave Piganeau, Jean Ducher, Augustine Guinoiseau, Innocente Pirola, Her Majesty, and La France. The same exhibit included some beautiful bunches of garden and button-hole Roses, among which the common Moss Rose and the Polyantha varieties were notable. Messrs. John Laing and Sons also had an admirable and representative collection of cut Roses.

A full prize list will be found in our advertisement columns.

— If the exhibition of the National Rose Society at Portsmouth was the smallest the society has yet held, that which took place at the Crystal Palace on the 2nd inst. proved, on the other hand, the most extensive on record. The number of exhibition Roses staged in competition on that occasion amounted in all to 7200, or 1450 more than the average for the five previous metropolitan shows of the society, and 100 blooms more than at the largest of these exhibitions—that of 1892,

There were over 100 exhibitors, whose exhibits, arranged according to the number contributed by each county, were as follows: Essex heads the list with 71 exhibits, Surrey comes next with 51, then Middlesex with 35, Herts 34, Kent 32, Oxford 29, Notts 26, Somerset 20, Sussex 20, Worcester 19, Gloucester 15, Suffolk 15, Berks 12, Leicester 10, Wilts 8, Bucks 7, Devon 6, Hants (including Isle of Wight) 6, Derby 5, Northampton 5, Yorks 3, Bedford 2, Cambridge 2, Shropshire 2, Dorset 1, Stafford 1, and Warwick 1. In addition to the English contributions, seven exhibits came from Wales and eleven from Ireland, but, unlike last year, there were no Scotch-grown Roses. Seldom, if ever, has the society held a more enjoyable exhibition. The day, although dull, proved fine and cool, thus allowing the blooms to continue fresh and bright during the whole day. The general quality of the flowers was remarkably good, and particularly was this the case in the exhibits from many of the smaller growers. Moreover, there was at no time any overcrowding, so that the blooms could be inspected with comfort by both members and visitors.—E. M., *Berkhamsstead*.

NATIONAL AMATEUR GARDENERS' ASSOCIATION.

JULY 3.

The exhibition of this association in conjunction with the garden party held at the Royal Botanic Gardens, Regent's Park, W., on Saturday last was not a very extensive one, but being so ably supplemented by several very excellent trade exhibits, the display was very interesting.

Flowers, fruits, and vegetables were each represented. Roses were shown in good form. Mr. G. W. Cook, The Briars, North Finchley, showing a fine lot of Teas in a competitive class. Hon. Edith Gifford, Innocente Pirola, Mme. de Watteville, Mme. Hoste, and Princess of Wales being the best in his stand. H.P.'s were best in the exhibit of Mr. Geo. Moules, who had a small box in which the blooms showed high culture. They were of much substance and very fresh. Tufted Pansies were well shown, Mr. R. M. Dougall, Walthamstow, winning the "Pye" trophy. The most notable flowers were Mrs. C. E. Gordon, Cottage Maid, Magic, A. J. Rowberry, Lord Salisbury, Florizel, Norah May, and Stophill Gem. Hardy flowers were seen in excellent condition, and there were some very fine individual exhibits. Vegetables were not very numerous, but they were of a high order of merit in each instance. Fruit was almost exclusively confined to bush fruit and Strawberries, and the exhibits proved that even among amateurs most excellent results have been achieved this season. Except in the case of a vase and hand-basket, the decorative exhibits were very poor, and the exhibitors have much yet to learn.

The trade exhibits were very much appreciated. Tuberos-rooted Begonias in splendid condition came from Mr. H. J. Jones, Ryecroft Nursery, Lewisham. Messrs. H. Cannell and Sons, Swanley, showed an interesting group of Cannas, Queen Charlotte, Pavonia, and Duchess of York standing out prominently from the others. Mr. Baxter, Woking, staged a number of sprays of Tufted Pansies, which were much admired. Mr. W. Rumsey had a fine display of cut Roses. Messrs. W. Cutbush and Sons, Highgate, had a superb group of Malmaison Carnations, the pink and flesh-coloured varieties being nicely balanced. Hardy flowers were sent by Messrs. J. Laing and Sons, Messrs. Barr and Sons, and Mr. T. S. Ware, each firm making a splendid display. Messrs. Dobbie and Co. made a very beautiful display of Sweet Peas.

**Royal Horticultural Society.**—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, July 13, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. A lecture on "Mutual Accommodation between Plant Organs" will be given by the Rev. Prof. Geo. Henslow, M.A., F.L.S., at 3 o'clock.

NOTES OF THE WEEK.

**Gaillardia Vivian Grey** is perhaps the most distinct variety yet raised, the flowers being of a clear uniform light yellow throughout, and of rather a pleasing shade in the border.

**Pentstemon diffusus.**—A very pretty kind of dwarf habit, with numerous spikes of flowers of a rose-purple tint externally, and internally of an azure-blue shade. The plant is well worth growing for its early flowering.

**Rose Captain Christie.**—We recently saw this handsome Rose in excellent form in a garden near Hampton Court. The plants were dwarf and sturdy, and being freely employed made a fine display of large and handsome flowers.

**Phloxes.**—Some of the very earliest of herbaceous Phloxes are *Le Soleil* and *Belair*, the former with bright rose-pink blossoms, the latter bearing rose-purple flowers in large panicles. As early kinds in this group these are worth noting.

**Carnation Miss Ellen Terry.**—So far as size and purity of blossom are concerned, this variety is quite a success, while of fragrance it has none; a misfortune in a variety that otherwise possesses considerable merit. It is rare that any flower is so devoid of scent as this.

**Callas in the open air.**—From Mr. Sangwin, The Gardens, Trellissick, Truro, come some handsome flowers and leaves of these, showing how well they do in the open air in Cornwall. The flowers are large, of fine substance and on strong foot-stalks, the leaves large and leathery.

**Ornithogalum pyramidale** produces, as the name implies, a large pyramid of pure white blossoms on stems 18 inches or so high that have a good effect in rather cool spots in the border. Where a mixed collection of hardy bulbs is grown this Spanish kind should always be found.

**Madonna Lilies** are now very beautiful in many gardens, and where the plants are free from disease the effect is very fine. In some districts we have seen but little of the disease this year, while in one cottage garden that contained quite a large number of spikes, one was very badly affected, while the rest were fresh and healthy looking.

**Codonopsis ovata.**—This curious little member of the Campanulaceae was included last week in Mr. Prichard's group of hardy flowers at the Drill Hall. The bluish-purple blossoms which are paler inside, are very curiously marked. When given a good position on a warm border this does well, and for a long time is covered with its drooping blossoms.

**Photinia japonica** (Loquat).—Considerable interest centred around some fruiting branches of this plant at the Drill Hall a week ago when Mr. Geo. Wythes exhibited several fully ripe fruits from Syon House. It is known as the Japanese Medlar or Quince, and the fruit rarely ripens in this country. Both the seed and pulp are very distinct in appearance.

**Morina longifolia.**—This is doubtless among the most striking of border perennials now in bloom. The spiny leaves are each about 18 inches long, and when developed very distinct and effective. From these in summer a flower-spike issues, containing crowded whorls of blossoms that change from white to pink and ultimately to a rich crimson hue that renders it a very conspicuous object.

**Oenothera speciosa** is now very showy, producing large white, rose-tinted blossoms in great profusion. Internally the handsome blossoms are nearly pure white, these presently changing colour with age. In this way various shades are seen when the plant is used freely. In good soil the plant grows and flowers freely. For flowering from June onwards for weeks in succession it is of considerable value.

**Pink Albino.**—I forward you a few blooms of my new Pink Albino. It received an award of

merit at the Royal Horticultural Society, June 15. It is a good grower and free bloomer, and also forces well.—J. LAMB, *Burton Joyce, Notts.*

\* \* This is a pure white smooth-edged variety of the border Pink, the flowers large and of fine form. In the blooms sent there are no signs of bursting. The fragrance, too, is very pronounced. Ed.

**Cytisus nigricans** is a neat and pretty kind with erect spikes of yellow blossoms on rather long peduncles. The leaves are trifoliate and stalked, and pubescent on the under surface. It is quite distinct among the later flowering kinds and worthy of attention. *C. n. longi-pedunculata* appears to differ only in the longer stems to the sprays of blossom. Both kinds were exhibited at the last meeting of the Royal Horticultural Society.

**Hemerocallis Thunbergi.** This beautiful form is not so freely grown as it deserves; indeed, many gardens are without it altogether. Yet notwithstanding, it is of equal value with *H. flava*, that comes earlier into flower, while the above, which is somewhat dwarfer and produces larger blossoms of a paler shade of yellow, makes a capital succession. As a border plant it is all that could be wished for, being hardy, vigorous and free flowering.

**Galega officinalis** is now a very pretty as well as useful plant either for the border or for cutting. Neat in habit and free and continuous in flowering, it should be grown freely where large supplies of cut bloom are needed. Its pretty pea-shaped blossoms of blue-lilac are produced in somewhat pyramidal clusters for a long time. There is also a pure white form of this plant that should be grown by all who have to furnish useful flowers in quantity. Both are of the easiest culture, and may be readily increased.

**Magnolia macrophylla.**—Messrs. Veitch send us from their nursery at Coombe Wood a flower of this distinct Magnolia. The flower out in the bud is priceless as to its beauty, and no Lily could equal it in form. The leaves are nearly 18 inches long, the under sides of a delicate silver hue. It is a native of North Carolina and has been introduced into England many years. There is at Claremont a remarkably fine specimen of this some 40 feet high. Mr. Burrell showed some blooms from this tree at one of the meetings of the Royal Horticultural Society last year.

**Senecio japonica.**—This handsome plant should always be borne in mind when hardy fine-foliaged plants, particularly such as are of a moisture-loving disposition, are being arranged in groups or masses. Planted in deep loamy soil where the roots may readily reach moisture, this fine plant will give but little trouble. Well grown, its handsome divided leaves attain to large size, and in summer a bold head of flowers several feet high is produced, the ray florets being of a rich deep orange. This handsome plant was included in Messrs. Barr's group at the Drill Hall last week.

**Tropæolum polyphyllum.**—When soplanted in the rock garden that the rather succulent growths can trail at will, this is a beautiful and interesting plant long before a flower is seen. This is the outcome of its silvery grey leaves. With about 2 feet of growth the blossoms appear, and furnish the stems for some time. The species is not only perfectly hardy, but it will force its way through the hardest of soil, frequently appearing in the gravel walk a yard away from the spot where the original tuber was placed. Occasionally the plant is trained upwards, though as we think only to hide its best side.

**Geranium sanguineum album** is certainly an acquisition, but from the difference between it and the type I am inclined to think it is hardly a variation only. The flowers do not open (in my specimen) flat and with overlapping petals, as in the type, but are distinctly stellate and at the same time cup-shaped. The growth, too, seems more straggling as yet and the flower pedicels longer. I note a difference, too, in the shape of

the leaves. They are more regularly palmate and lobed than in *G. sanguineum*. It would be interesting to know its origin, although it will make no difference to its value in the garden.—T. J. W., *Crouch End*.

**Acantholimon venustum** is a lovely summer alpine, as choice and beautiful as it is rare. The largest single specimen I have grown or seen, produced some thirty of its prettily formed sprays of pink blossom, one and sometimes two sprays issuing from its spiny-pointed rosettes. The foliage is quite rigid, and its almost invisible needle-like spines very sharp. This species is not nearly so free as the better known kind, *A. glumaceum*, often used as an edging, and in this way growing freely. This latter cannot compare with the above, which is of much slower growth and seeds only rarely. It is now one of the most charming plants flowering in the rock garden, and worthy of increase by every known means. Gritty loam and a sunny position suit it well.—J.

**Iris Kämpferi**.—I send you herewith a few blooms of my first crop of Japanese *Iris Kämpferi*. I think them extremely beautiful, and these Irises might with advantage be largely grown in our English gardens. I got these over direct from Japan, and they came in very good condition and have since bloomed well in the gardens at Fairawn. Those which were planted on a comparatively dry site and well exposed to the sun always come up first, but they do not carry the finest blooms. A batch which I planted round the edges of the pond and not in a sunny situation flower later, but the blooms are always larger and more beautifully coloured. I will send you a few of the later blooms soon. They are very free flowering, and they bloom almost equally well in ordinary flower beds and when planted in the grass in a damp situation, but I think it is under the latter conditions that they attain their greatest beauty. Some of the blooms measure 6 inches across, and the tints vary—purple, violet, striped varieties of these tints with white striping, and some of them are pure white without any admixture of colour. I have not as yet tried growing them from seed.—ERNEST HART, *Fairlawn, Totteridge, Herts.*

**Philadelphus Lemoinei**.—Each succeeding June confirms the good opinion formed of this hybrid at the time it was sent out by its raiser, Mons. Lemoine, of Nancy. The distinctness of *P. microphyllus* from all the rest of the Mock Oranges made it a very promising subject for the hybridiser, and by crossing it with the old and well-known *P. coronarius*, M. Lemoine has added to our collections a shrub that is not only a beautiful one, but one more distinct from the rest of the *Philadelphuses* than most of the so-called species in that genus are from each other. The influence of *P. coronarius* has given the hybrid a much stronger and more vigorous growth than that of *P. microphyllus*, but the latter species has bequeathed the purer whiteness of its flowers, together with their sweeter, lighter perfume. *P. Lemoinei* grows 4 feet to 5 feet high (it may be more eventually), of somewhat erect habit, with thin ovate leaves each 2 inches long, that have a few scattered teeth on the margin. The flowers are each 1 inch to 1½ inches across, and produced from the short axillary shoots of last year's branches in such abundance as to transform them into columnar masses of pure white blossom. M. Lemoine has sent out several other hybrids originating from the same parents; among them are *Lemoinei erectus* (scarcely different from the above), *Boule d'Argent* (double) and *candelabra*.—W. J. B.

**The Calochorti** are now among the most charming of flowers in the open, and where due attention has been given to the soil in which they are growing, a good display of flowers is almost sure to result. Particularly good and showy in their varied colours is the section of these known as the *Eldorado* strain. The almost endless variety of colour in this group is very remarkable, and varies from purple and reddish purple to rich red-pink, and even salmon shades, the many inter-

mediate hues defying description. The lovely golden yellow, known as *venustus citrinus*, is a beautiful flower, the beauty of which is enhanced by pencillings and blotches of a reddish hue. As a cut flower for small vases this is quite unique, and quite equal to many of the choicest Orchids in point of beauty, while the bulbs are cheap. A very handsome form, with yellow blossoms each 4 inches or 5 inches across, is *C. clavatus*, which hitherto has been unknown to cultivators of this beautiful class, though botanists have for years known of its existence. Another really beautiful kind, perhaps the most chaste of all, is *C. Guni-soni*, with pure white flowers, having a zone of a yellowish green shade in the centre. These lovely things may be grown in pots, though they flower much more freely in prepared soil in the open ground.

**Notes from Baden-Baden**.—*Richardia Ad-kumi* is now flowering in an open border. It is distinct from *R. Nelsoni* in its glaucous green, more sagittate leaves and the somewhat larger flowers, which also are creamy white, with a shade of sulphur, and have the violet-black blotch extended up to two-thirds of the spathe. Both species are likely to become popular. Several plants from a batch of seedlings of *R. Rehmanni* are now blooming, and it is singular how different they are in the pink shading; some are pink, others are white with a pinkish shade. A pleasing contrast to these is produced by a small group of a superior form of *Sandersonia aurantiaca*. The plants are 4 feet high, having each six to ten flowers the size of a Walnut; these orange bells, backed by the fresh green, healthy leaves, look very striking. In the rock garden *Campanula mirabilis* is now in full flower, and it well deserves its name. It is a low pyramid about 2 feet through, forming a much-divided, branching bush, covered with hundreds of its pale blue flowers, which are nearly the size of those of *C. Medium*. For the introduction of this very beautiful plant horticulture is indebted to the munificence of M. Wm. Barbey and to the unwearied exertions of the botanist, M. N. Alboff, who found the plant as a single specimen—no second found—in a rocky part of the Caucasus. Here it has proved perfectly hardy.—MAX LEICHTLIN, *Baden-Baden*.

## PUBLIC GARDENS.

**Open space for Clerkenwell**.—Yesterday afternoon Captain F. T. Penton opened the churchyard in connection with the old church of St. James, Pentonville, which has been laid out by the Metropolitan Public Gardens Association as a recreation ground. The ground, which is within the parish of Clerkenwell, will be maintained by the vestry. This is the fifth open space which the Metropolitan Public Gardens Association has provided in the parish. The Earl of Meath said that the whole of the money for laying out the ground—£600—had been provided by the City of London Parochial Foundation, and Captain Penton had promised to provide a fountain at a cost of £100.

**Battersea Park**.—A proposal will shortly come before the London County Council for the construction of a suitable embankment along the whole river frontage of Battersea Park. The existing river wall is of a very slight nature, and a large proportion of it is in an extremely bad condition. The Parks and Open Spaces Committee of the Council, who are making the proposal, state that the present wall may be described as a mere skin of concrete blocks, generally 9 inches in thickness and in some cases less. For some years past it has been the practice to patch the worst places from time to time at an annual outlay of some £400 or £500. The result, however, has not been satisfactory, and the deterioration which has arisen in past years has not been overtaken, so that the wall is steadily growing worse. The Council's engineer reported in 1895 that the cost of putting the wall into a proper state of

repair, if undertaken at that time, would be about £6000, and that even then there would be a subsequent annual charge of about £200 for its maintenance. Under these circumstances the committee are firmly of opinion that the best and most economical course would be to reconstruct the wall in a substantial manner. The length of the river front of the park is about 1300 yards, or about three-quarters of a mile, and the engineer is of opinion that a granite-faced wall with a granite parapet can be constructed there for the sum of £43,500. In view of the large recurring charge for maintaining the existing wall and of the economy that would ultimately be effected by the substitution for it of a permanent granite embankment, and also taking into account the enhancement of the appearance of the park, the committee strongly recommend the Council to adopt their scheme. It is proposed that the cost of the improvement shall be charged to capital account, the repayment being spread over the full term of the stock, out of the proceeds of the issue of which the cost would be defrayed.

## THE VICTORIA MEDAL OF HONOUR IN HORTICULTURE.

THE following is the official list of those who have been selected by the Royal Horticultural Society as the recipients of the medal in honour of the Queen's Diamond Jubilee:—

Baker, J. G., F.R.S.	Moore, F. W.
Balfour, Prof. Isaac	Morris, Dr. D.
Barr, Peter	McIndoe, James
Barron, A. F.	Milner, H. E.
Beale, E. J.	Molyneux, E.
Bull, Wm.	Monro, G.
Bunyard, Geo.	Maries, Chas.
Burbridge, F. W.	Nicholson, G.
Crump, W.	O'Brien, Jas.
Dunn, Malcolm	Paul, Geo.
D'Ombraïn, Rev. H. H.	Paul, William
Druery, C. T.	Rivers, T. F.
Dean, R.	Rothschild, Hon. Walter
Dickson, Geo. (Chester)	Schröder, Baron
Elwes, H. J.	Sander, F.
Ellacombe, Rev. Canon	Seden, J.
Foster, Prof. M.	Smith, J. (Mentmore)
Fraser, John (S. Woodford)	Smith, Martin R.
Gordon, Geo.	Speed, R.
Hooker, Sir Jos. D.	Sutton, A. W.
Henslow, Rev. Geo.	Sherwood, N. N.
Hole, Very Rev. Dean	Thomas, Owen
Hudson, J.	Thomson, David
Heal, J.	Thompson, W.
Horne, Rev. F. D.	Turner, H.
Herbst, H.	Willmott, Miss
Jekyll, Miss G.	Wolley-Dod, Rev. C.
Kay, Peter	Wright, J.
Laing, John	Wythes, Geo.
	Wilson, G. F.

**The weather in West Herts**.—A week of changeable, but, on the whole, moderately warm weather. On the 2nd inst. the reading in shade rose only to 62°, but on two other occasions it exceeded 70°. The nights were, as a rule, warm. Since the beginning of the month the temperature of the ground at 1 foot deep has fallen 3°, but is still slightly above the mean for this depth. Rain fell on only one day, and then the amount deposited proved insignificant. The winds have been mostly high, and the record of bright sunshine rather below the average for the time of year.—E. M., *Berkhamsted*.

## BOOKS RECEIVED.

"Paying Pleasures of Country Life." By various authors. G. Routledge and Sons, Ltd.

"The New Gulliver; or, Travels in Athomia." By C. T. Druery, F.R.S. Roxburghe Press, Victoria Street, Westminster.

**Names of plants**.—*H. Osman*.—The Fern is *Adiantum concinnum*. We cannot undertake to name varieties of *Coleus*.—*George Phelly*.—2, *Heuchera Richardsoni*; others next week.—*C. P.*—Please send specimens.—*N. P.*—*Phalæopsis amabilis*.

# THE GARDEN.

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[JULY 17, 1897

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## ORCHARD AND FRUIT GARDEN.

### PEACH BLISTER.

The abnormal prevalence of blister on outdoor Peach trees, which seems general throughout the country this year, may be of some service by adding to one's knowledge of the influence of aspect. In this district the visitation has been very severe, and I notice that trees on south walls are looking far worse than those facing west; indeed, they are reduced in many instances to the merest scarecrows. The season will be gone before all signs of the scourge have been eliminated, and the trees will have to strain all their resources in order to become furnished with good bearing wood for another year. All hopes of a good crop have been shattered for this season, for though plenty of the fruits set, those on the worst branches failed to swell. This is very unfortunate, as many gardeners who had almost given up Peaches in the open have lately been planting again and were looking forward to a good harvest. The comparative well-being of trees facing west holds out hope that a remedy is to be found in choice of site, and that we may, by providing complete shelter, either temporary or permanent, from east winds, cope with the difficulty. It may be objected to my suggestion as to planting on west walls that Peach trees require all the sunshine they can get in order to ripen the wood properly, and this would probably be a safe objection with very late varieties, which are also late in losing their leaves, but it has no weight when mid-season and second early varieties—the only ones which come really to perfection on outside walls far north of London—are grown. For the shooting season and for market very late Peaches are only a little less valuable than early forced fruit, and those which pay least well are the midseason varieties which have been grown in cool houses, and which all ripen together and make a glut. The same varieties on a west wall ripen well, but later, and they then pay for growing. I believe that too much stress is

often laid on the advice to thoroughly ripen the wood of Peach trees. Most growers have seen plenty of instances in which comparatively green shoots have set and carried through fruits not to be beaten by those on their more favoured fellows, and, provided they have been given plenty of room, have perfected good foliage and are of good size without being gross. These conditions may be attained as well on a west as on a south wall; better, in fact, if the tendency to blister is reduced. It would be interesting to learn how Peaches in other districts have fared, and especially if aspect has had any influence, beneficial or otherwise, on the trees.

Livermere Park.

J. C. TALLACK.

**Nectarine Victoria.**—As is well known, this fine Nectarine is apt to crack badly, but looking through the houses at Culford recently I found a splendid crop of fine fruit and not one cracked. This is the result of cropping heavily, combined probably with something that the variety likes in the soil and careful treatment. Humboldt, too, was fruiting grandly, and of Peaches Grosse Mignonne, Lady Palmerston, a good Peach with deep coloured flesh, and Royal George, were all carrying heavy crops of fine fruit.

**Melon Royal Favourite.**—This Melon appears to be well adapted for early forcing. Some time since I saw a nice crop hanging in the early house at Hillside, and Mr. Day, the gardener, thinks very highly of it. Last year at the same place it was grown in a later house, the crop, size of fruit, and quality being all that could be desired. Royal Favourite is sure to be largely grown, as few varieties have so fine an appearance, the colour of well-finished fruit being a beautiful lemon. It is also particularly well netted.—J. C.

**Cucumber Veitch's Challenger.**—I have given this Cucumber a trial this season, and the results are very satisfactory, as it is not only a heavy and continuous cropper, but the majority of the fruits grow very straight and they have but little shank. They vary in length from 18 inches to 20 inches; the colour is also good, being a nice deep green, and they carry a heavy

bloom. It is a white-spined variety, but the fruits are but sparsely clothed with spines, and the colour of the flesh and flavour are all one wish for in a Cucumber. I have neither seen nor grown a Cucumber for a long time past which has given me greater satisfaction than Challenger, and have accordingly marked it for extended cultivation.—A. W.

**Yellow Raspberries.**—It is somewhat surprising that the yellow and white varieties of Raspberries are not more commonly grown—at least in private gardens—as they are so useful for dessert and make quite an attractive dish. The old White Antwerp is well worth growing, as although not so free as the red variety of that name, it bears profitable crops in good soil and the flavour is delicious. White Magnum Bonum, of larger size than Antwerp and early ripening, is a grand Raspberry, and, where only one summer white variety is grown, is perhaps the best, all points considered. For bearing in autumn, the canes being cut down in February, Yellow Quatre Saisons should be grown. This is a good bearer and the fruit is of fine flavour and valuable for mixing with the red Belle de Fontenay for dessert at a season when outdoor fruit is becoming scarce.—C. C. H.

**Melon Eastnor Castle.**—An old favourite and still one of the best of Melons among the dark green-fleshed section. It is seldom met with in cultivation now, owing, I believe, to the difficulty in obtaining seed of the true strain. I grew it this year for supplying the first crop, having been disappointed in obtaining seed of my favourite kind for that purpose—Davenham Early. The seed of Eastnor Castle proved to be true, the plants producing a good crop of even-sized fruits, all of which bore unmistakable signs of its parentage, Eastnor Castle being, as is well known, the product of a cross between Victory of Bath and Beechwood. The parents were two most excellent kinds in themselves, and it is doubtful whether the progeny—the variety under consideration—has ever been surpassed in point of flavour. A large fruit grower, when looking round these gardens a few weeks ago, made the remark that he grows none but Eastnor Castle Melon for his own eating, and has done so for many years past, as he considers the flavour to

be perfection. It is a capital grower and very prolific, being suitable for growing either on the restrictive or extension principle, and the individual fruits attain a large size under good cultivation. A great boon would be conferred on gardeners if someone possessing a true stock of this excellent Melon would increase it by saving and eventually distributing the seed, as I feel sure that many would be glad to obtain it once again.—A. W.

#### A SHORT STRAWBERRY SEASON.

LAST year the supply of Strawberries failed very quickly, but this season it was even worse in many districts. Rain fell opportunely, or otherwise the crop would have been a complete failure. As far as market growers are concerned, the reason for the shortness of the supply is not far to seek. All the early flowers either expanded or scarcely showing colour were blackened by frosts, and as a consequence fully a week was lost, and the crop was also much lighter than usual, or considerably below the average. Then came the spell of exceptionally hot weather in June, and this rushed in the later varieties. During the week ending July 3 Strawberries were spoiling in the shops in large quantities. Less than a week later the season was practically over.

Protecting rows or beds of Strawberry plants in flower from frost may seem a rather heavy undertaking, but I have never found it so, and in two seasons out of three found that the outlay of a few shillings saved fruit worth nearly as many pounds. In the first place the rows of plants ought always to be worth the trouble of attending to. It is strong, young, or comparatively young plants that give the best results. Any upwards of three years old cannot be depended upon to do well in the majority of gardens. They are the first to suffer from the effects of severe winter frosts, they are invariably later in producing ripe fruit than strong young plants; the fruit, if plentiful, is usually undersized and indifferent in point of flavour, and these old plants are the first to feel the effects of drought. A good succession of young Strawberry plants ought, then, to be constantly provided. There should be no waiting for the old plants to show signs of failing before planting more, but each season rows or beds, according to circumstances, should be planted and an equal number of old ones destroyed. By old plants I mean any that have produced three good crops of fruit. Hundreds of readers can doubtless point to older and, in their estimation, very profitable beds, but after many years' experience the conclusion I have arrived at is that younger plants give much the best results, that is if we take into consideration the quality as well as quantity of fruit supplied, and also the duration of the supply.

Market growers who plant by the acre have almost, perforce, to be content to dibble out runners late in the season and to prevent these from fruiting the following summer, in order that they may attain a serviceable size for fruiting one year later. Not so the private gardener. He can layer his runners early into either ridges of fresh soil or pots, well-rooted plants being ready for their fruiting quarters by the end of July. It is then when they ought to be replanted, delaying this important work till late in August, owing, it may be, to the site for them not being ready earlier proving a great mistake. Strawberries should have a freely-manured, deeply-dug site, and if trenching is practised—a desirable proceeding—this ought to be done in the winter previous, in order that the ground may have time to settle and to become well mellowed for the Strawberry

plants. Crop this trenched ground with early maturing Potatoes, and these can be cleared off, leaving the soil in admirable condition in time to plant Strawberries. By planting the latter early and firmly, and subsequently keeping them well watered, also free of weeds and runners, grand plants capable of producing a full crop of fine fruit can be grown before the winter stops further progress for a time.

Strawberries in many cases are planted too thickly. Instead of the plants being disposed 18 inches asunder in rows 2 feet or rather more apart, the more satisfactory distances would, in the end, be found 2 feet and 3 feet respectively. When grown closely together they smother and rob each other; whereas when more room is allowed, the individual plants produce heavier crops, which seldom fail to ripen properly, for the simple reason they are not smothered by leaves. One reason why the Strawberries grown in the open fields are often superior in point of flavour to those produced by plants of the same variety in private gardens is because they get more light, sunshine, and air. The plants, owing to rooting in solid ground, form short, stout foliage, and they also have abundance of room. During the height of the season the ripening fruit can be seen between the rows of plants in long bands of colour; whereas the luxuriant foliage on garden-grown plants not infrequently hides the fruit and spoils the quality. For an extra early supply of Strawberries, plant Noble, Royal Sovereign, John Ruskin, or other favourite early-ripening variety more thickly, or from 15 inches to 18 inches apart each way, on a warm sloping border where they can and ought to be protected when in flower. Only crop them once, the plants, after having also yielded abundance of early runners, paying well for the trouble taken with them. Young plants invariably give the earliest ripe fruit. Late Strawberries are quite as much appreciated, if not more so than early ones, and in order to prolong the season, plant either Loxford Hall Seedling or Latest of All on a cool border. I have found both of these varieties succeed remarkably well on a wide wall border facing north-east. Other varieties have been tried in a similar position, but they never equalled the two named either for lateness, weight of crop, size of individual fruit, or quality. Curiously enough, the plants fail after giving two crops. The one-year-old plants produce the finest fruit, and the two-year-old the latest and heaviest crop. Loxford Hall Seedling is not a strong grower, and may be planted about 18 inches apart each way.

W. IGGULDEN.

**Apple Pine-apple Russet.**—A medium-sized, but highly-flavoured dessert Apple, coming into use about Christmas-time, when it is much appreciated. The fruits are roundish ovate, with a pale yellow skin, sometimes coated all over with russet and in some instances merely strewn with irregular patches of dark brown russet. As its name denotes, it has a pine-apple flavour, which is very pronounced, and the flesh, which is yellowish white, is very juicy. The tree is healthy, hardy, grows well, and makes a fine bush or pyramid.—S. E. P.

**Peach Alexander.**—In my opinion this is one of the earliest and hardest varieties of the Peach yet produced for outdoor culture, and this opinion is not given after one or two years' trial only, as I have grown it for the past twelve years. It is a most vigorous grower, making plenty of foliage, while it is a very free cropper, and it is but seldom that it misses bearing. The fruits, which grow to a fair size, are brightly coloured and the flavour is very good for such an early variety. On a west wall the fruit generally ripens from July

10 to the 15th, but this season it is a little later than usual. It should be freely planted for the earliest supply where Peaches succeed outdoors.—S. E. P.

**Peach Stirling Castle.**—This is still one of the best second earlies we have for general excellence, whether grown indoors or out. A little later than Royal George, it forms a good succession to that variety, and its large, handsome and highly-coloured fruits leave nothing to be desired in the way of flavour. It is a hardy, vigorous grower and an excellent forcer, and, unlike its companion Royal George, it is quite free from attacks of mildew. A few years ago on a west wall I lost a fine old tree of Stirling Castle which would be more than thirty years old, and this tree invariably bore heavy crops of large highly-coloured fruits. Intending planters of Peach trees should certainly make a note of Stirling Castle as being a first-rate second early kind, and one that possesses a vigorous constitution.—W.

**Eugenia Ugni.**—This is an evergreen fruiting shrub belonging to the Myrtle family the fruits of which are edible. It is a native of Southern Chili, and must therefore be accorded the protection of an orchard house or greenhouse, as it is not hardy. Under glass this Eugenia fruits freely, and the individual fruits, though small, or about the size of an ordinary Red Currant, are of a pinkish colour, while the flavour is very agreeable, somewhat resembling that of a Strawberry. It succeeds best grown as a bush in a pot or tub, and for compost, two-thirds loam and one of peat with a liberal addition of sand seem to suit it well. Those in search of a novelty may do worse than purchase one or more plants for filling an odd corner in either of the structures mentioned, and the fruit ripening as it does in the autumn would then be very acceptable.—A. W.

#### STRAWBERRIES.

As the fruit committee of the Royal Horticultural Society at a recent examination of the numerous varieties of Strawberries being grown at Chiswick made only one award, and that but an award of merit, to Wonderful, a mid-season variety that carries heavy crops of fruit of medium size, longish form, and excellent flavour, it may be assumed that so far no very special merit has this season been displayed. It is undoubtedly most advantageous as well as right that all new sorts should be grown at Chiswick before awards are made, as the true habit and cropping quality of each one are then so admirably seen. A marked feature of the numerous varieties at Chiswick, both old and new, is the comparative absence of that high quality which is so generally termed flavour. A few have it in good form, but so many have it not. The best flavoured this season were Royal Sovereign, President, Edouard Lefort, Auguste Boisselot, and Latest of All, not really very late here, whilst of newer varieties but not yet fruiting their best because young plants, Admiral and G. Wythes give good promise. Wonderful, as mentioned above, is also of nice flavour. There seems to be so much labour expended in securing varieties that carry heavy crops of large fruit, that only very rarely does real flavour crop up. Nothing in new Strawberries last year excelled, or indeed came near to, Veitch's Perfection. That is, however, a distinctly late variety, as might be expected from the progeny of British Queen and Waterloo, and so far that has not been tested this year. Its habit is excellent, as the leaf growth is moderate and compact, and the flower-stems stand up prominently and very erect. But whilst moderate leafage may be good for pot culture, outdoors stronger leafage is no evil, as it shades the ground and the fruit. If anyone wishes to have a variety that is an enormous cropper, he can hardly do

better than grow Acquisition. The fruits are large, but soft and flavourless. Those who like an immense fruiter also, but producing rather smaller and firmer fruits well suited for preserving, will do well to grow Newton Seedling. It is really a sight to see the crop of fruit, and not bad fruit either, which two-year plants of this variety produce. In the direction of cropping we may well be satisfied, and as to size of fruits, more than satisfied. In new varieties we need flavour, which is so rarely found. Some seem to think flavour is found in sweetness, others in acidity, which they term briskness; but real flavour is an indescribable quantity, delicious to the palate, and more resembles perfume in a flower than colour or beauty. The fruits of the variety Wonderful are ideal ones for the dessert because they are not large and can be eaten at once. Another desirable feature in Strawberries is solidity. So many are soft-fleshed and, to use a current phrase, will not travel. How many of the varieties growing at Chiswick have soft, pulpy fruits and full of water. We want much more of flesh and less water. A. D.

**Currant La Versailles.**—It is somewhat surprising that this Red Currant is not more generally known and cultivated. I have heard it said that it is a shy bearer, but with me it crops better than any other sort, and that on a light soil which does not hold moisture very well. Others condemn it on account of its ungainly growth, the lower branches often being crooked and growing in a downward direction; but I cannot see that this is a sufficient reason for discarding it where profit is the chief consideration. Were I planting Currant bushes with a view to growing for market I certainly should go in for La Versailles. I thin out the trees well, so as to admit plenty of light and sunshine, and the noble bunches of fruit colour up beautifully. The fruit will hang a long time in good condition if protected from birds, and is unsurpassed for wines and jellies.—C. C. H.

**Strawberry Stevens' Wonder.**—I do not remember to have seen a note on this Strawberry other than as a forcing variety. I was induced to plant it for first crop in the open, but with disastrous results, as it is not early and not at all a heavy cropper. In the open it makes a lot of top growth, just the reverse of what one might expect, and it cannot be termed early. My first fruits—these badly shaped and of poor quality—came in with President, a mid-season variety. Stevens' Wonder is useless for general cropping. Had it been as early in the open as under glass it would have been a valuable introduction. Before penning these lines I waited to see how it did in soil of a different character from mine in another locality, and though there is less leafage there was no advantage as regards earliness. It would be well if others who have given it a trial for early fruiting in the open would give their experience. My soil may not have suited it, and other readers may have had better results.—S. M.

**Grape Duke of Buccleuch.**—This, although a grand Grape when in perfect condition, is seldom seen in anything but a ragged form, the berries more often than not being badly spotted. Attempting to grow the Duke on its own roots generally ends in failure, the wood being rank and sappy and many of the laterals barren. Some contend that the way out of the difficulty is to work it on to the Black Hamburgh, but I have seen it fail in a good many instances so worked. Golden Queen seems to suit this capricious Grape well, as, indeed, it does other uncertain varieties, such as Alwick Seedling. A few years ago I put a bottle graft of the Duke on to Golden Queen, and it has done well, improving each year and exhibiting very little trace of the well-known spot, which often disfigures the berries and renders them useless. Almost every lateral bears a bunch, and the berries swell to a large size. As soon as softening commences a rather drier, bracing atmosphere

is necessary, giving atmospheric moisture when air is on.—C.

**Apple Yorkshire Beauty.**—This Apple is synonymous with Red Hawthornden, but I think the appellation Yorkshire Beauty has the prior claim as far as nomenclature is concerned. It is rightly named, for it has a beautiful wax-like appearance, with a handsome rosy blush on the exposed side of the fruit when fully ripe. Orchard-grown fruits are generally more highly coloured than are those produced on bushes and pyramids. It is an excellent market kind; the fruits grow from medium to large in size, some being round and somewhat flattened, while others are inclined to be conical. The flesh is tender, white and juicy. It is an excellent cropper grown in any form of tree, and should be largely planted for market. Trees worked on the Paradise stock require rather careful pruning, as large numbers of fruit buds are produced at the tips of the young wood. These should therefore be left until the crop has been gathered, when they may be spurred back. This Apple is not a long keeper, and is at its best during October and November; after this it is apt to go woolly.—A. W.

**Apple Mere de Menage.**—Next to Norfolk and Herefordshire Beauties, this is the deepest coloured Apple grown among table fruits. We have darker-coloured fruits among the cider Apples. An old kind, named Red German or German, runs it very close for colour, but it is neither so large nor so handsome an Apple, and it does not keep so well as Mere de Menage, which comes into use in December. In a properly constructed Apple room the fruits will keep in good condition until March. In some seasons the fruits grow to an extraordinary size. Such was the case last year, and in average seasons they attain to good dimensions. The fruits are very firm and heavy, the flesh crisp and juicy, and it is an excellent cooker. Young trees are inclined to make rampant growth, but in the case of pyramids and bushes lifting soon rectifies this, and once they commence to bear they give no further trouble.—S. E.

PROLONGING THE STRAWBERRY SEASON.

THOSE who require Strawberries for a long period may have them of excellent quality for five or six weeks. Such kinds as the well-known and still valuable President, La Grosse Sucrée, Gunton Park, and Sir C. Napier may be relied upon for main-crop supplies. Strawberries, with special culture, may be had as late as September and October by planting forced plants to fruit a second time. Very few growers have the means to grow so late a crop. All do not force to have the plants at command, and it is to Strawberries grown in the ordinary way I would refer. For late crops, the Queen family in certain localities does well on a north border if the soil is heavy and good cultivation can be given. The fruits obtained from such a border are superior in quality to those in a more open quarter. I have grown British Queen on a cool border when it failed in the open in a drier soil. Frogmore Late Pine is a specially good late Strawberry, and with me it succeeds in light soil without special culture. I do not allow the plants to bear more than two crops. This variety is not a large grower, makes but few runners, and is a superb fruit as regards flavour; indeed, I have seen it preferred by some to a British Queen. It is one of the highest-flavoured Strawberries grown. I do not give it much room—2 feet by 18 inches between the plants—and grown on an east or north border it is a fortnight later than the mid-season varieties. Another excellent variety of the Pine family is Elton Pine, a larger fruit than Frogmore Late Pine, more acid, and on this account much liked for preserving. This is earlier than the Frogmore Late Pine, a heavier cropper, of a rich red colour, and does well in any soil. The Filbert Pine is not so well known as its merits deserve. This grows where others of the Pine section fail. It has more foliage and the

fruits are of a dull orange-red. It grows well in light soil and will be found suitable to follow the mid-season varieties.

A variety named Georges Lesnir, a continental variety, has proved a good late fruiter. It cannot be classed as a Pine variety, but it has a rich Pine flavour, is of large size, and liked by many. It is a continuous bearer, a valuable late fruiter, and admirably adapted for north borders. This will provide dishes for a fortnight or three weeks in good soils. My best late kind, if quantity, size, and quality are considered, is Laxton's Latest of All. The name is not a happy one, as it is now (July 7) ripe on a north border. We have others of the Pine family later, also Oxonian. Latest of All is a very fine fruit of true Queen flavour, and good colour. It is a small grower, needs planting close, and does best from young plants. This under a north wall will give ripe fruit for three weeks, and its good quality should commend it to all growers who require late fruit. With me it gains favour yearly, and though like the Queen it does not always ripen quite to the point of the fruit, it is far ahead of others in most respects, and if I were restricted to one late variety I would give Latest of All the preference. Oxonian is later, larger, and of good colour, but it lacks quality. It is a robust grower, and fruits freely from young plants. M. W.

**Strawberry Monarch.**—After the good accounts I had heard of this Strawberry, I confess I am rather disappointed in it. It is a splendid grower, and the fruit is absolutely faultless in appearance, very large and highly coloured, but, like Royal Sovereign, it lacks the rich vinous flavour one looks for in a first-rate Strawberry. Many people will consider it good enough for general use, and as a market fruit it may do very well, for it is a very heavy bearer; but where flavour is required we must look beyond Monarch.—W.

—This new Strawberry does well on the light soil of my garden, growing vigorously and producing fruit of large size and highly coloured. I obtained the plants in small pots last autumn, and so small and indifferently rooted were they that I did not expect much from them this season. They have, however, made wonderfully fine plants, the foliage being large, and apparently a good resister of spider. I am informed that on good Strawberry soil Monarch grows to an enormous size, and that it is certain to become a popular variety.—C. C. H.

**Pruning Red Currants.**—Would you through the columns of THE GARDEN tell me when is the right time to prune Red Currants?—PERPLEXED.

\* \* Red Currants may be pruned at any time from November to March during absence of sharp frost. Bushes growing in strong retentive soil, and which consequently ripen their wood later than those in a lighter, warmer compost, had better be left till say January, this giving them all the longer a rest. Young trees also that have made very vigorous growth may be left till the same date. In large gardens pruning has to be pushed on all through the winter whenever the weather is open. As a rule there is no advantage in deferring the pruning of bush fruit of all kinds after the foliage has fallen and the sap has ceased to flow.—ED.

SHORT NOTES.—FRUIT.

**Nectarine Early Rivers.**—The other day I saw a tree of this variety, and was much struck with the handsome appearance of the fruits, which were fast approaching maturity. It certainly is a great advance on Lord Napier as far as colour is concerned, and if the flavour is only as good as its outward appearance betoken, it is indeed a most valuable addition to the race of early Nectarines. I intend giving it a trial next season.—W. S. E.

**Peach Prince of Wales.**—This is a most excellent Peach for outdoor wall culture, coming into use at the latter end of September when given a western aspect. It is a heavy bearer and the tree is hardy and makes vigorous growth. This season is no

exception to the rule as far as its cropping is concerned, as it is again bearing well. The fruits when ripe are highly coloured, attain a large size, and are richly flavoured.—S. E. P.

**Peach Crimson Galande.**—Last year I sent a note in praise of this fine Peach. I now wish to draw attention to its free-cropping qualities in order that intending planters and those unacquainted with it may learn what a reliable Peach it is. I have grown it for several years past outdoors and have never known it to miss a crop, the present season proving no exception to the rule, and this when one hears so many complaints of a scarcity of outdoor Peaches. The tree is also very hardy and makes plenty of healthy growth, and with me is not so liable to insect attacks as are many other varieties, while size, colour, and flavour are all one can wish for.—A. W.

## FLOWER GARDEN.

### PRIMULA TRAILLI.

I was much interested in Mr. Richard Dean's remarks concerning the plant above-named as exhibited in April last before the Royal Horticultural Society, and while I cannot fully agree with Mr. Dean that the plant exhibited by Mr. G. F. Wilson is "identical" with *P. involucrata*, I go a long way when I say the differences between the two are very small and quite insufficient to entitle it to specific rank. My first impression of the plant was that it was *involucrata*, but, remembering the creamy blossoms of this plant, I could not longer regard it "identical" with the typical species, and concluded at once that it was a well-marked variety of this well-known plant. Mr. Wilson's plant is undoubtedly related to *P. involucrata*, though it certainly possesses minor differences, e.g., some slight colour in the flowers, and, as shown, slight differences of foliage also. These latter, however, in so far as it refers to the aspect of the leaves, may in a measure have been accounted for owing to the dry state of the plant, which I subsequently found was drooping from lack of moisture. Had the plant been immersed in a pail of water a few minutes and placed before the committee an hour later, the horizontally-disposed leaves may have assumed a more erect form, and thus brought it even more closely in touch with the type to which it undoubtedly belongs—viz., *P. involucrata*. The fact should not be lost sight of that this is a decidedly moisture-loving species, and to exhibit such a plant lacking moisture is to deprive it for the moment of some, at least, of its essential characteristics. I am surprised that the so-called *P. Trailli* obtained a large number of votes for specific rank, which only shows the need for such plants being placed before a sub-committee of hardy plant experts, whose decision shall be final. *P. Trailli* is not mentioned in the synonymic list that obtained at the *Primula* conference of April, 1886.—E. JENKINS, *Hampton Hill*.

—With reference to several notices about *Primula Trailli* in recent numbers of *THE GARDEN*, I think it may be of interest to mention that I received about two years ago a large packet of seed from Dr. Watt himself so labelled. The seedlings flowered well last year, but I could see no difference botanically between them and the species I have long had under cultivation as *P. involucrata*, Wallich (Munroi, Lindl.). Dr. Watt was in England last year, so I showed him his seedlings in flower. He at once said that they had nothing in common with his *P. Trailli*, which was a much larger and handsomer species, and that his collector must have gathered the seed from *P. involucrata* by mistake. These same plants (I have eight pots full) came up much stronger this spring, flowering abundantly and ripening seed; some even are still throwing up flowering spikes. The

flowers differ considerably in colour, varying from pure white to more or less pronounced lilac, also in size, some of my flowers being larger than those on the plant exhibited at the Royal Horticultural meeting by Mr. G. F. Wilson.—R. H. B.

—I have only a few remarks to make on the note on *Primula Trailli* at page 16. I told the committee in a note to the chairman all I knew about the *Primrose*. The seed came to me from a friend, a first-class Indian botanist, who must have been well acquainted with *P. Munroi* or *involucrata*. He asked that I should be careful with it, as the *Primrose* had not been bloomed in this country. I have grown *P. Munroi* or *P. involucrata* for many years. There is an especial interest attached to it from the fact that it was in full retreat in Afghanistan that Lieutenant Munroe (afterwards General Munroe, a great authority on grasses) saw the plant and secured it in spite of danger. The more I see of *P. Trailli* the more I am convinced that it is a real acquisition. I am an old man, so must not look forward too much, but hope next season to show the *Primrose* before the committee in such form that the great majority of the members will not only be glad that they gave an award of merit, but will consider the plant worthy of a first-class certificate as being a valuable new plant.—GEORGE F. WILSON.

**Sweet Pea Aurora.**—This is a new American variety sent out this season with a great reputation, but, as far as my own experience of it by growing it goes, and also what I have seen of it elsewhere, I hold it to be disappointing. It has a fault common to many of our newer varieties of Sweet Peas—that of the standards not being erect and displaying themselves to the best advantage, but curling down over the wings and hiding them from view. What is absolutely necessary is stout, erect, smooth, well-formed standards standing up, so that the colour of the wings can be distinctly seen. Queen of England, white, is a good model to follow, and no new variety can be accepted as first-rate which has curled incurving standards. *Aurora* is white, distinctly striped with bright pinkish rose, or, as the Americans give it, orange-salmon. The woodcut of this given in catalogues shows the standards of this variety to be perfectly erect, broad, smooth, and so displayed to the very best advantage. But we get used to woodcuts of novelties; they are devised to provoke a sale; the blossoms are large in size, but the defect mentioned above does not enable them to be seen to the best advantage.—R. D.

**Silene maritima plena.**—It is very curious to note the behaviour of this plant and its shy flowering, as referred to by Mr. Wood at page 466. Having invariably succeeded with it, and in gardens and soils very opposite in many ways, I had regarded it as among those alpine plants that could be depended upon to flower abundantly and regularly year after year. Indeed, this is after many years' experience of it, for the plant has grown so freely in some instances that I have pruned back the whole, or, at any rate, the bulk of the current season's growth, quite close upon several occasions, and if the subsequent growth is any guarantee of the wisdom of the experiment, I can only say that it was so successful that it was often repeated in subsequent years. In my experience this plant has not only grown freely, but flowered abundantly. It will repay a liberal treatment, and in the raised positions of the rock garden I have mixed manure freely with the soil with excellent results. Chalk I have never added in any instance, but in very heavy soils leaf-mould and cocoa-nut fibre to lighten the soil. In light sandy soils patches 2 feet or more across, that produce hundreds of handsome flowers in a season, have resulted in two years. Cuttings inserted in September in sandy soil soon root, and if planted in good light soil early in March, will give some flowers before the plants are a year old.—E. J.

**Hardiness of Gladiolus The Bride.**—This cannot be too largely grown in any garden,

public or private. For cutting it has few or no equals. It is invaluable in pots and delightful in lines or groups in the open air. Even in gardens where the hardiness of *The Bride* may be doubtful it is more worthy of being lifted and stored in safe quarters during the winter months than so many other *Gladioli* that are mostly subjected to this treatment. Before the present magnificent garden hybrids were raised, the older species, such as *byzantinus*, *cardinalis*, *gandavensis*, &c., were generally subjected to this treatment with the best results. *The Bride* is even more worthy of this extra labour where there is the slightest reason to doubt its perfect hardiness. Independent even of this consideration it is possible that the annual lifting and re-planting of *The Bride* may add to its vigour, health, and beauty. It may stand considerable cold in earth and air with impunity or without positive injury. It is certain, from the enormous quantities forced and bloomed under glass, that it thrives under genial conditions. Nor must the safe proviso of at least 6-inch deep protection of earth over the corms of *The Bride* be forgotten. If an inch or two of cocoa fibre be added to that the corms will be all the safer.—D. T. F.

### NOTES ON HARDY PLANTS.

**Ranunculus crenatus.**—There is a special way of propagating this slow-growing, but free-flowering species, and all the group to which it is most nearly allied. The idea is to take advantage of its free flowering otherwise than from seed, which happens, as in this case, to be rarely fertile. The early spring or winter flowers have a short and stout scape, with a sort of node or bract joint about midway up. When the flower is half expanded, pick it off; the result is that a foliar development sets in at the joint, and by June it becomes a nice rosetted tuft of leaves, only needing to be pulled off the parent plant with original flower-stem and set at once as an offset, though there may be no roots. Contact with the soil causes roots to be emitted in two or three days in June, and the young plants are assured. Of course it is only worth while to adopt such special means of propagation where offsets and seed largely fail, and it need not be said that but few plants lend themselves to this mode of increase, and certainly all species of the genus *Ranunculus* do not.

**Trautvetteria palmata** is a free-flowering plant of 2 feet to 3 feet stature, and delightful for a half-shaded position. The corymbs of bloom remind one of the white fluffy *Thalictrums*; but not only are they more symmetrical, but far more durable. It is decidedly showy, but, what is perhaps more, it is unique and most interesting.

**Geranium lancastriense album.**—This new variety in all except the colour of its flowers more resembles var. *sanguineum* than the type, i.e., its branches are more ascending, longer and longer jointed. The big white flowers are, of course, its main feature and the only one to note, and these are certainly striking.

**Dianthus Lindsayi.**—This is a curious and pleasing cross between *D. alpinus* and *D. barbatus*, with all the variations of colour common in the *Sweet William*. There is a strong suggestion of alpinus in the large flat flowers, which do not come out all at once in big corymbs, as with *barbatus*. Stature 9 inches to 1 foot.

**Cytisus schipkaensis** is now beautifully in flower, and by far one of the best dwarf and spreading white-flowered things now out. This is saying a deal when so many of the dwarf shrubby *Veronicas* and *Leiophyllums* are out too. One formed a good opinion of this with its clusters of large white flowers at the first sight, but my old specimen of three or four years has improved year after year as it has become more established, and in no respect more than the size and purity of its flowers. A deep root-run of stony soil with full exposure to sunshine seems to suit it well. J. Wood.

*Woodville, Kirkstall.*

### THE ROCK GARDEN AT ABBOTSBURY, NEWTON ABBOT, DEVON.

IN previous numbers of THE GARDEN I have given a long series of articles dealing with the construction of rock gardens. As, however, these essays were necessarily more or less theoretical, I propose giving a practical example of a rock garden actually constructed at Abbotsbury, the residence of the late Mr. E. Fisher. Having arranged this rock garden, I can speak of the various combinations and effects from practical experience. It cannot be said that the site was a very suitable one, inasmuch as it consisted of an ordinary pasture field about an acre in extent, bordered on one side by the town of Newton Abbot and on the other by a row of huge Elm trees adjoining the pleasure grounds. As irregularity is one of the most important conditions for a picturesque arrange-

the surface of the stones plastered with cement or any other substance (as is so often done to the detriment of the plants). The formation of the pond, waterfall, and cave would, of course, have been impossible without cement, but even here it was used only in places entirely hidden from view, so that in the whole of this rock garden not a particle of cement work or masonry of any kind can be seen.

In arranging the rocks, I followed the principle so often advocated in these columns, *i.e.*, the rocks were disposed in groups of all sizes, with grassy slopes full of flowers, and banks of miniature rock shrubs here and there to give the necessary repose; and though each individual group would distinctly show the stratified character of real rock, the whole of the groups combined represent a most irregular and broken-up appearance. A considerable portion of the field was given up to plantations for

description, but I hope to best serve the interest of the readers of THE GARDEN by giving a short review of such arrangements of plants, &c., as have given the most satisfactory results. Throughout this work I have tried to avoid an aimless scattering of plants, but rather to mass the various kinds of shrubs, as well as rock plants, into effective groups.

Entering the rock garden from the drive, the visitor meets with groups of all kinds of flowering shrubs, such as *Coryopteris mastacanthus*, *Choisya ternata*, *Magnolias*, *Rhododendrons*, *Heaths*, *Cydonia*, &c. All are fringed with hardy perennials. The largest, and in spring perhaps the most effective, of these groups consists exclusively of a large collection of *Berberis*, containing, among others, *B. Thunbergi*, *B. aristata*, *B. japonica*, *B. buxifolia*, *B. Fremonti*, *B. Darwini*, *B. stenophylla*, *B. asperma*, *B. vulgaris atro-purpurea*, *B. nepalensis*, *B. ilicifolia*, &c. Traversing a grass path between groups of Bamboos and various *Cistuses* of the larger kinds, such as *C. ladaniferus*, *C. crispus*, *C. florentinus* and others, the

#### ROCK GARDEN PROPER

opens into view, and its beginning is indicated by scattered blocks of rock protruding here and there from the sward, or from a mass of *Saxifragas* and other plants. A bold mass of rock forms a pleasing recess, with seats commanding a view of the waterfall and other features. The plants furnishing this recess are, like the rocks, of the larger and bolder type, such as Australian Tree Lupines, *Dracocephalum grandiflorum*, masses of *Heuchera sanguinea*, *Pentstemon ovatus*, carpets of *Gaultheria procumbens*, *G. nummulariifolia*, &c., and closer to the eye the golden yellow *Morisia hypogea* and other plants of the smaller type. Most effective is a fine specimen of *Pentstemon Scouleri*, with its large bright purple flowers (see illustration p. 42). The plant here illustrated is growing in a mixture of loam and stones on an elevated position, and it measures considerably more than a yard across, being only 15 inches in height. *Romneya Coulteri*, the great Californian Tree Poppy, is doing well at the foot of a grassy slope, divided by a path from a bog garden extending to the margin of the pond. One of the handsomest plants in this part is the great Japanese Groundsel (*Senecio japonica*), with its huge lacinated leaves and enormous yellow flowers on stems over a yard high. In a shady recess are *Cypripedium spectabile*, the yellow-flowering *Saxifraga Hirculus grandiflora*, *Primula Poissoni* and many others, while the sunny part of the bog garden contains among others a mass of *Dodecatheon*, *Houstonia cerulea*, *Primula farinosa*, *P. rosea*, *Saxifraga aizoides*, several *Pinguiculas* and a host of others. *Dryas octopetala* has spread out into a large carpet, increasing faster than its yellow companion, *Dryas Drummondii*. A group of rocks about 3 feet high is devoted almost entirely to *Dianthus*es of various kinds, including *D. neglectus*, *D. alpinus*, *D. caesius*, *D. glaucus*, *D. alpestris*, *D. cinnabarinus*, *D. sylvestris*, &c. *Gentians* in about a dozen varieties were planted in rocky beds on a lower level. *Gentiana bavarica* has unfortunately made very slow progress, but is doing better since it was shaded. Besides *G. acaulis*, which forms a large mass by itself, *G. septemfida*, *G. cruciata* and *G. verna* have flourished best. Above the *Gentians* are various *Anemones* and *Saxifragas*. *Anemone Pulsatilla* is luxuriating in a flat space at the foot of an almost perpendicular group of large rocks. *Opuntias* of various kinds crown the top of this rock, but the almost vertical fissures at the sides have become the home of many ch ice Rockfoils, such as *Saxifraga Frederici Augusti*



Colony of *Saxifraga longifolia* and Edelweiss in rock garden at Abbotsbury. From a photograph sent by Messrs. R. Veitch and Son, Exeter.

ment, considerable excavations were made, and the soil thus gained was used for forming banks and planted with suitable trees and shrubs to form a screen. The Elm trees were made "harmless" by a deep concrete wall completely under ground, which effectually prevents the intrusion of tree roots into the rock garden proper. The object of the rock garden was to provide a home for as many mountain flowers as possible, and to furnish a picturesque adjunct to the gardens where apparently natural rocks should be scattered in profusion and adorned with plants so selected as to form a source of interest practically all the year round. The rocks were built with limestone of a light brown colour, which shows the plants to great advantage. In imitating the strata of natural rock no cement was used, the crevices being filled with suitable plants instead. Neither was

shelter, with broad, irregular fringes for all kinds of hardy plants of the bolder type, arranged for the most part in large, irregular masses. The central portion, forming the rock garden proper, is from 60 yards to 80 yards in length and about 35 yards in width. There are bold features, such as a waterfall 15 feet or more in height, a shady Fern-lined cave with seats, a streamlet fringed with water-loving plants, a pond aglow with *Marliac's* Water Lilies, a bog garden, and rock steps of natural appearance facilitating access to every portion of the work. There are also introduced several stepping-stone bridges and smaller groups of scattered rocks devoted exclusively to the smallest and choicest gems of the mountain flora. Inasmuch as close on 2000 species of plants were used for the embellishment of this rock garden, I cannot here enter into a detailed

(true), *S. luteo-viridis*, *S. apiculata*, *S. Burseriana* major, and, above all, that silvery queen of Rockfoils, *Saxifraga longifolia*, a group of which intermixed with *Edelweiss* is shown in illustration, p. 37. Some of these handsome rosettes have already attained a considerable size, and grouped together their effect is decidedly striking. Rocky steps lead from this point over a steep slope about 12 feet high and fully exposed to the mid-day sun. Here masses of *Helianthemum* have spread out into a large group of brilliant colours a dozen yards or more in extent, and their somewhat rapid progress is checked by a stepping-stone path carpeted entirely with the bright blue *Veronica alpina*. Another part of this sunny slope is devoted entirely to different kinds of *Sedum*, *Sempervivum*, and a mass of the handsome hardy *Mesembryanthemum uncinatum*. A sheltered nook also exposed to the full sun contains a collection of plants recently introduced by Messrs. Veitch from Colorado. Of these, *Townsendia Wilcoxiana* and several species of *Erigeron*, *Trimorphaea*, and *Erysimum purpureum* have done exceedingly well, but I failed with *Polemonium confertum melitum* and *Phacelia sericea*. The steps leading over this slope are very convenient, but they resemble an accidental pass formed by Nature rather than a staircase. Every crevice is filled with carpeting plants, from which the stepping stones protrude naturally. Among other plants I used *Thymus lanuginosus*, *Arenaria balearica*, *Herniaria glabra*, *Arenaria cæspitosa*, *Veronica repens*, *Sedum dasyphyllum*, &c.

At the bottom of the afore-mentioned sunny slope is a small group of rocks reserved for small alpine which either hate limestone or do not require it. Though the outside part of this rock bed is bounded by the same kind of limestone rocks as the rest of the work, the interior of all the crevices is filled with granite and sandstone chippings mixed with the soil. In this part flourish, among others, *Lewisia rediviva*, *Ranunculus parnassifolius*, *Saxifraga calyciflora* with its handsome red flowers, *Androsace carnea*, *Linum maritimum*, *Linum Lewisii*, *Achillea umbellata*, *Dianthus glacialis*, and many others. *Androsace glacialis* did well for a time, but died the second year.

#### THE CAVE,

which is close by the last-named group, is, of course, formed by the largest and boldest rocks. The entrance is marked by almost perpendicular "cliffs," furnished in every crevice with suitable plants. On the north side are masses of *Ranonda pyrenaica*, including the pure white variety, whilst from a shady nook at the foot of the rock spring *Primula sikkimensis*, *Primula japonica*, *Polypodium canbriicum*, and such carpet plants as *Mitchella repens* and *Linnaea borealis*. Facing south is a bold prominence planted with the variegated New Zealand Flax, and the larger ledges of the rocks above are devoted to groups of such plants as *Achillea tomentosa*, *Campanula glomerata dahurica*, *Erigeron aurantiacus*, *Cheiranthus alpinus*, *Polemonium reptans*, *Polemonium humile*, &c. The lower parts nearer the eye are adorned with dwarfier kinds of plants, noteworthy *Lithospermum prostratum*, falling in a large blue sheet over the stone, *Erinus alpinus* and its white variety, *Hypericum repens* and others. The interior of the cave is partly lined with *Selaginella helvetica*, *Cystopteris fragilis*, *Cyrtomium falcatum*, *Scolopendrium fissum*, *Scolopendrium crispum*, *Erpeton reniforme* and other good things. Above the cave, and partly hanging over the large boulders forming the roof, are *Mullenbeckia complexa*, *Polygonum vacciniifolium* and *Arbutus*

*Uva-ursi* entwined with *Smilax aspera* and the long-flowering shoots of *Tropæolum tuberosum*. Here also are shrubs among the rocks. Very graceful in appearance is the New Zealand Broom (*Notospartium Carmichaeliæ*) with its arching branches covered with pink flowers. *Citrus trifoliatus*, Pomegranate, and *Desmodium penduliflorum* are also conspicuous. The last-named is intended chiefly for autumn display, when the long arches of rosy purple flowers are very telling. Masses of *Waldsteinia fragarioides* and the beautiful blue *Camassia esculenta* are most cheering in spring. But, perhaps, one of the most effective groups of spring flowers is that showing a large plant of *Genista præcox* with its elegant pale sulphur-coloured flowers on a carpet of the rosy purple *Aubrieta Leichtlini* (see illustration, p. 48). Though the engraving portrays the shape, it can give no idea of the charming contrast of colour. In order to give some amount of probability to the idea of the cave being a production of Nature, it was necessary to keep its immediate surroundings more bold and massive in character than other parts; the rocky ledges were, therefore, kept rather wide and were planted with groups as large as the space would allow. One ledge is devoted entirely to the golden yellow *Onosma tauricum*, another to the "Alpen Rose," *Rhododendron ferrugineum*, and *Rhododendron hirsutum*, while still others are adorned with *Centaurea macrocephala*, *Centaurea montana* and its varieties, *Carpenteria californica* with its large white flowers, *Pinus Pumilio*, *Anthericum liliastrum*, and a whole host of others too numerous to mention. A portion of the rocky steps leading from the top of the cave down to the waterfall is seen in illustration, p. 39. Except where the foot falls, these steps are carpeted entirely with various suitable plants; the sides of the steps are bordered at times by almost perpendicular rocks, and in such cases plants are chosen that look most graceful when their flowering branches fall down over the rocks. *Vittadenia triloba* (syn., *Erigeron mucronatus*), for instance, forms long festoons hanging down at great length, and very graceful, too, are *Tunica Saxifraga*, *Arenaria montana*, *Arenaria grandiflora*, *Campanula isophylla* and its white variety, *Glossocoma clematidea*, with its bell-shaped flowers of peculiar marking, *Umbilicus chrysanthus*, and many more.

The rocks at this point are traversed by an apparently natural gully, and the scene is enlivened by a waterfall a little over 15 feet high and from 5 feet to 8 feet in width tumbling over the rocks and wetting with its spray the numerous plants which here have found a home. One of the happiest of these is *Acena ovalifolia* (see illustration, p. 46), which hitherto I had often used with good effect for covering dry stony banks, but never before have I seen it flourish as in this position where its foliage is wetted occasionally by the spray of the waterfall. The illustration shows only a portion of the plant, which has spread out into a curtain quite 10 feet long and 5 feet wide, forming with its deep green foliage an excellent background to the bright alpine flowers arranged in front of it. I would strongly recommend this plant for a similar position. Above the waterfall *Rubus deliciosus* spreads its arching branches covered with white flowers over a prominent rock, which later in the season is almost hidden from view by the brilliant blue flowers of *Plumbago Lar-pente*. The streamlet which forms the waterfall is traversed by a stepping-stone bridge. A mass of rocks close by is covered in spring by a large group of *Edraianthus* (*Wahlenbergia*), succeeded in autumn by a brilliant display of

*Zauschneria californica splendens*. On the sides of the streamlet are such water-loving plants as *Spirea palmata*, *Astilbe rivularis*, *Iris* in variety, and *Spirea astilloides*. The source of the streamlet is lost to view in a Fern-lined cleft of a rock, covered in spring by masses of *Plox* of the setacea type, succeeded by late-flowering alpine in many sorts.

A walk around the rocks near the waterfall leads again to a lower level. In a large shady recess are many varieties of hardy *Cyclamen* of both autumn and spring-flowering kinds. Some of the dwarfest kinds of Japanese Maples of the *Acer polymorphum dissectum* type are planted between the *Cyclamens*, and give them the shade they love so well. Separated from the main rocks by a grass path is a group devoted on the shady side to the Fire Pink (*Silene virginica*), the bright purple *Saxifraga pyrenaica superba* and a few others, but the chief adornment of this group is formed by *Hairbells* and *Poppies*, a combination, by the way, which has given very satisfactory results. The collection of *Campanulas* includes, among others, *Campanula G. F. Wilson*, *C. Waldsteiniana*, *C. garganica hirsuta*, *C. Elatines*, *C. Raineri*, *C. Zoysi*, *C. Hosti*, *C. Erinus*, &c. The *Poppies* are confined mostly to the neatest and smallest kinds of the *Papaver alpinum* section in its various shades of red, pink, yellow and white. A low, almost flat portion of the ground near the pond is planted with *Primula Sieboldi* and *Spirea filipendula*, the latter flowering when the season of the *Primula* is over. Close by are also numerous other *Primulas* of the alpine type, such as *P. Auricula*, *P. Clusiana*, *P. marginata* and others.

#### THE POND,

which is fed by the water coming from the waterfall, is, of course, as irregular as possible. Of cement and other substances used in its construction no trace is visible. The sides consist only partly of rocks. Here and there intervene grassy banks covered with *Iris*es, or with such things as *Osmunda regalis*, *Saxifraga peltata* and the gigantic *Spirea kamtschatica*. On a water-soaked promontory and surrounded by smaller plants *Gunnera manicata* is in a fair way of feeling at home. That the pond itself is furnished with aquatics goes without saying. Special places were prepared for them below the surface of the water. *Marliac's* lovely *Nymphaeas* have given the most satisfactory results. Of the larger kinds, *N. Marliacea carnea*, *N. M. Chromatella* and *N. M. rosea* were introduced, and of the smaller kinds, the varieties planted were *N. Laydekeri rosea*, *N. pygmæa alba* and *N. pygmæa helvola*. On the east side of the pond the water again emerges as a streamlet, which is crossed by stepping-stones, and finally the water is lost to view beneath a rock. On the south side of the pond are a Heath bed and also a specially constructed rocky bed reserved for very choice alpine of the smallest kinds, such as *Androsaces*, *Soldanellas*, *Silene acaulis*, *Silene exscapa*, *Draba bruniefolia*, *Aretia vitellina*, *Cyananthus lobatus*, *Cerastium lanatum villosum*, *Umbilicus spinosus*, *Morisia hypogæa*, *Senecio incanus* and other gems which one likes to have close to the eye, where they can be watched more effectively than when scattered in places where they are likely to be overrun by plants of coarse growth. The whole of the work, including the planting, was carried out by Messrs. R. Veitch and Son, of Exeter.

*Elmside, Eceter.*

F. W. MEYER.

**Dictamnus Fraxinella.**—The rosy purple form of this is now very attractive. The spikes are each about 18 inches in height, bearing a loose raceme of widely opened flowers that show up well

on the green foliage. To get large plants of this species they should be planted in good soil, not too moist, and left alone, these having a much better effect than small clumps. There is also a white form of this plant, but it is not pure, and, taken all round, the purple form is the better.

**Exhibiting Delphinium spikes.**—How much better would these flowers look if set up in large vases in quantity, such as seven or eight spikes of any one variety, and spread out, some leafage being added. But those who exhibit these things seem to want to show as many varieties as possible rather than endeavour to attract attention by setting up a bold exhibit of fine bunches in large vases. How noble large *Chrysanthemums* and *Paonies* look set up in this fashion; so also would *Roses* if we could get them on sufficiently long stems always. Mr. G. Mount shows *Roses* sometimes in this fashion, and singularly beautiful they are. Some day perhaps we may hope to see *Cactus Dahlias* so shown rather than having them tied hard into triangular-shaped clusters by the aid of wire frames. If those enterprising nurserymen who exhibit hardy flowers so largely and so generously at the Drill Hall meetings would but select the best only—not more than some two dozen—and set them up in good clumps artistically spread out and stood in large vases, what a gain it would be all round. I hope some day that at least *Delphinium* spikes may be so exhibited.—A. D.

**Oriental Poppies.**—“R. D.” in an interesting note on page 467 refers to these showy plants. They are still quite gay here—that is to say, the typical form and the darker crimson kinds. The variety *Silver Queen* I consider not worth growing, as it is neither white nor rose, but a very undecided and unattractive tint of light purple. These washed-out-looking colours, so far from being specially named, ought never to be grown in any quantity. *Salmon Queen* as I have it here is quite a different thing, and very pretty if not grown in company with the deeper and brighter coloured forms. Each colour should be kept separate, with a considerable distance between them, if the best results are looked for. Nothing is worse than planting these *Poppies*, as I saw them recently, close to double red *Paonies*. Both flower about the same time and both are noble hardy plants, but the effect of one kills the other, so to speak. In the bracteatum section the large dazzling scarlet *Beauty of Livermere* is one of the best, but, as “R. D.” points out, many fine and varied forms can be raised if the seed is obtained from a reliable source.—R., *Suffolk*.

**Carnation Lord Rendlesham.**—This excellent variety should be included in all collections, its distinct shade of colour—buff ground, suffused with rose—giving it a most attractive appearance. It is, moreover, a very robust grower, making abundance of grass and opening its first flowers early in the season. Its continuous habit of flowering, and the fact that it grows and flowers well in light shallow soil, enhance its value. *Carnations* of this colour are none too plentiful, and several of the varieties have weak constitutions and often die out if the soil is not of the very best description. Those who have not yet obtained it

should do so during the coming autumn.—*Grower*.

**Malva moschata alba.**—Here is a hardy perennial which is delightful in the border at this season of the year, but too seldom met with. It is easily enough grown, one of those plants which takes good care of itself and is not easily killed. I find that it does best in an open sunny position, care being of course taken that it does not suffer from want of water when the weather is hot and dry. I have plants which have formed pyramids of shoots, and they have a fine effect when in full bloom. The plant is readily raised from seed.—R. D.

THE ENGLISH SPRING—AN APPRECIATION.

As in bright mid-May, after a three-months' absence from England, one journeys swiftly Devonwards, past fields golden with *Buttercups*, orchards

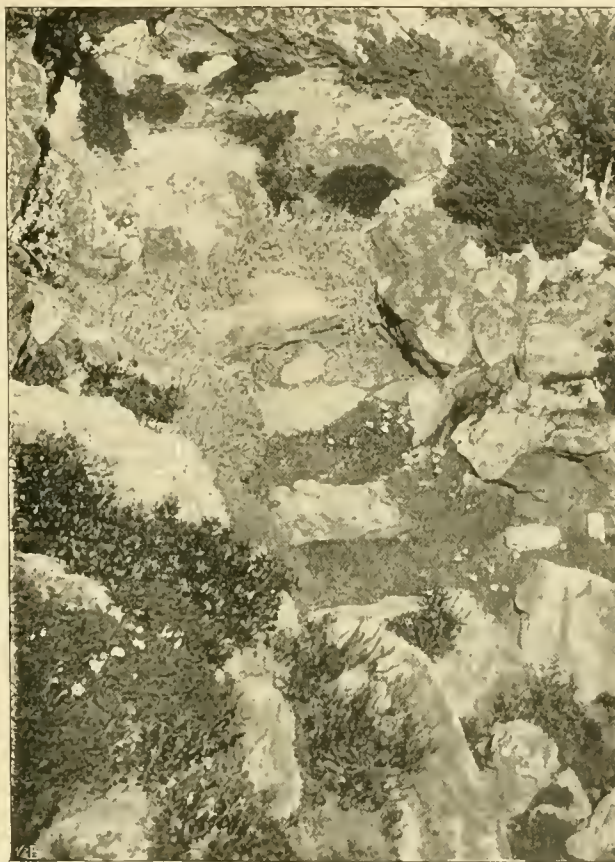
and as belonging by right to English skies alone, possibly because in childhood conditions were chiefly favourable for prolonged study of the heavens, from beneath the shadows of the Elms or from the top of the newly-stacked hayrick, at what time such white fleecy clouds slowly traversed the blue vault. Doubtless in those careless days we took but little heed of the beauties of Nature, but wiser Memory focussed them on her retina against the time when the stress of life brought ability to understand and appreciate. Now and again the scent of a *Bean* field recalls the refrain of the “*Bee Song*,” “I all day long have filled my sack Among *Bean* blossoms white and black.” Anon, sweeping out of a deep cutting, we fly by “cottage chimney smoking from the woods and cottage gardens smelling everywhere, confused with smell of orchards.”

At length, driving up the narrow tree-embowered valley in the sunset, we see the swallows hawking along the stream, the swifts wheeling on tense pinions far overhead in the clear sky, and note that the martins have renewed their nests beneath the eaves. The cuckoo calls a welcome from the copse; the pink *Thorn* and *Laburnum*, though past their best, still show their colours over the winding village road, and the garden is odorous with *Lilac*, while in the house great bowls of early *Tea Roses* fill the rooms with fragrance. That the goddess of spring is coy and uncertain must be allowed, but to be so is an attribute of the “eternal feminine” that serves but to render her smiles the more fascinating. Surely on such a day no one, least of all the wanderer, is inclined to cavil at the English spring! S. W. F.

**Dendromecon rigidum.**—I shall be glad of any information as to the outdoor culture of this. Should it be in the full sun? My plant faces west.—H. B.

\*\* This member of the *Poppy* family should be well suited in a westerly or south-westerly position, though one of the largest plants we have seen was in a position nearly due south at the foot of a wall and growing freely. We have our doubts, however, as to the perfect hardiness of this Californian plant, and unless your plant is strong and well established, we would suggest either lifting and potting it in September or October, or giving it the protection of some dry bracken about the branches, and say 3 inches of coal-ashes or cocoa-fibre refuse at the roots. The plant will doubtless prove most hardy in a raised position in the rock garden, where a not over-luxuriant growth will be formed, and where if planted at the base of a bold piece of rock the plant would receive protection. In the more favoured parts of these islands it should prove a very charming as well as useful subject. Very firm planting in loam and sandy peat without manure suits it well.—Ed.

**Tufted Pansies at Chiswick.**—The trial of these hardy plants at Chiswick is this season not a success, growers having but poorly responded to the council's request for plants. The site selected for the purpose is without doubt a first-rate one, and has the advantage of shade on the south side and but one face. Of pale-lued varieties, most certainly the prettiest is *Bridegroom*. The flowers, of good form, flat, and borne in great profusion, are of a soft pale lilac hue. They open nearly white and deepen in colour with age. The habit is excellent. *Bluestone* has the very best dwarf habit, and the flowers are flat, round, and bold; colour slate-blue. It is a capital variety to work upon to secure quality and good habit. *Pencaitland* is very pleasing, but the yellowish tint of the lower petal detracts somewhat from the whiteness of the upper ones. Still, at Chiswick it is very pretty. *Trentham Purple* seems to be the best of its section, and *W. Niel* the best of the reddish-lued varieties. We have but to see a collection of the numerous varieties in commerce set up in spray form at exhibitions, if not to be seen growing, to be able to distinguish the worthy from the worthless. So many that help to make up these displays and are thought to be pretty are soon found to be



Portion of rocky steps at Abbotsbury. From a photograph sent by Messrs. R. Veitch and Son, Exeter. (See p. 33.)

here and there still pink with *Apple* bloom, and hedges white with blossoming *Hawthorn*, it is with feelings akin to penitence that one returns to the old allegiance, and is inclined to recant all that one has thought and said in praise of the beauties of foreign climes, so infinitely more precious appear the well-remembered charms of an English spring. There is a restfulness in the gentle sweep of the landscape to be found in no other lands—truly, “God's finger touched, but did not press in making England”—an ineffable peace in the emerald pastures where the red cattle browse; in the cool coombes where the evening sunlight slants athwart the transparent green of the young *Beech* leaves—one of the most beautiful sights in Nature. “Such nooks of valleys lined with *Orchises*, fed full of noises by invisible streams.” The very cloudlets that sail serenely across the blue sky, though cloud-shapes are much the same all the world over, seem familiar

useless for outdoor or garden decoration. It seems a pity that some classification cannot be made of those Pansies, those that are really useful for massing or bedding, or growing in large tufts in borders to give good effects, being divided from those numerous worthless varieties that give no pleasing effects whatever.—A. D.

## ROSE GARDEN.

### ROSE NOTES.

Now that our Roses are in full growth and beauty, they will be much benefited by a free use of stimulants. Too often these are given to a weakly plant and withheld from one carrying a lot of bloom and growth. A weakly plant cannot use additional food to the same advantage as one in full vigour and activity. Either cultivate the surface-soil frequently with the hoe or mulch with some well-decayed manure. Where Roses are grown for decoration in the garden, I would not use a mulch, but give a dressing of some artificial manure and stir or hoe this in at once. Natural manures are more beneficial and lasting, but they are all more or less unpleasant in the Rose garden. The production of exhibition blooms is another matter. A most important item at this season is the budding of stocks. July is an excellent time for this operation, and all stocks of the hedge Brier intended for standards should be budded this month. Select buds from a strong-growing plant of each variety, and also give a little consideration to the matter of quality and freedom with which the plant flowers. Much of the so-called deterioration of Roses can be traced to injudicious selection of buds. We are careful with seed-saving and in the propagation of many plants by cuttings, and yet often take a Rose-bud without any attention to selection as regards the healthy, vigorous and free-flowering properties of the parent plant. In the issue for June 26 "A. D." writes of Briers as hedgerow plants. I do not think any plant will make a better, more impenetrable or sweeter-scented hedge than the hybrid sweet Briers. I am sure no animal would face my own plants, now some 4 feet to 6 feet through and 10 feet to 12 feet high. It would be easy to tie these into a narrower space, but I have left them to grow at will, and they have been a delightful feature ever since early in May. The trusses of deep scarlet upon Anne of Gierstein and Meg Merrilies, also the deep metallic salmon and copper of Lady Penzance have been very showy. Jeannie Deans produces the finest trusses with me, many carrying from one to two dozen buds and blooms. This is a semi-double, a more lasting flower, and with rather sweeter foliage than the others. Grand as these Briers are in every form, I like them best when worked as tall standards. The long rods of blossoms droop over very gracefully, and are of a decidedly deeper colour than when worked upon the Manetti stock. I am trying them as stocks for Roses, and they certainly root more freely than the ordinary hedge Brier. To prune these is a mistake, but they grow so strongly that one may well have to use the knife or bill-hook to keep them within bounds in many instances.

Referring to colour in W. Allen Richardson, remarked upon by "S. W. F.," my own observations all point to cold and changeable weather as the main cause of pale coloured flowers. Apart from this, W. Allen Richardson is naturally a most changeable blossom. It is not difficult to cut a flower that would pass for Lamarque, one even paler yellow, one a deep yolk of egg and orange, and more than one combination of these colours from the same

truss, especially early in the season. Under glass I have seldom had pale blossoms, while a cold season outside almost invariably gives the dingy white and pale lemon colour that has so often disappointed the grower and caused many unjustified complaints, suggesting that the nurseryman had supplied a duplicate, or at least an inferior example of this popular variety. We find this diversity of colour in many Roses, notably Mme. Lambard, with its deep crimson, very pale salmon, and intermediate shades. Even Maréchal Niel sometimes gives us a very pale lemon, quite as much so as many specimens of the so-called White Maréchal Niel which I have seen this spring. The same plant will often throw good blooms of a deep golden yellow, and also of a pure and clear yellow shade, Jean Ducher, Rainbow, Marie Van Houtte, Anna Ollivier, Pride of Reigate, and others also vary very much. "Philomel's" notes upon Rose sports are most interesting, and his timely warning to amateurs as regards the watching and testing of any apparent departure before deciding it is really new is very opportune. Recently I have had a comparatively large number of sports. I have cut several from La France, C. Mernet, Souvenir d'un Ami, and a grand acquisition from Sunset which I am sure will become one of our most popular Roses. This season I cut a bloom of Letty Coles that quite eclipses any other specimen I have hitherto seen of this sport from Mme. Willermoz.

A note in the same issue upon Rosa rugosa Belle Poitevine I can fully confirm. M. Bruant kindly sent me a ground plant of this and his other new rugosa, calocarpa, before they were sent out. Both are beautiful at the time of writing, and have been for several weeks. R. calocarpa is my favourite of the two—a better grower than Belle Poitevine, flowering in immense trusses, a perfect bush of scarlet berries late in the summer. Both last year and 1895-6 this was a grand sight with its deep golden, pale yellow, and crimson-shaded foliage. I was able to cut large sprays long after the majority of our deciduous shrubs were quite bare, and they retained their leaves well when cut. We must feed climbers upon walls, and cut away the bulk of last season's wood that has now gone out of flower. A little judicious use of the knife at this season saves loss of much growth later on. It is healthy rods that flower best later on, and by thinning out the wood now, we ensure good growths with less risk of their forming upon old and badly-placed wood.

RIDGEWOOD.

**Rose Comtesse de Murinais** is a vigorous growing Moss Rose that would make a fine pillar variety. I think these strong growing Mosses should be more often trained in this form, for not only would they give variety to the walks, drives, and wild gardens where these pillar Roses are usually employed, but the style of training is decidedly favourable to a freer production of blossoms. This Rose has fine trusses of white flowers, and the lovely mossy buds are tipped with rosy pink, which form a pretty contrast to the white expanded flowers.—E.

**Rose Kaiserin Augusta Victoria.**—This comparatively new Hybrid Tea is certainly among the best introductions of late years either as a garden Rose or as a show flower. It is also likely to be much prized by growers for market, as it has most of the characteristics required as a sale bloom. It is white, faintly tinted cream colour, and perfect in shape. The flowers are borne on stiff foot-stalks in profusion, and the growth of the plant is excellent; the leaves fine and not so liable to mildew as those of many kinds. I saw a fine lot of plants in pots of this a few days ago, and have at various times noted

it growing well out of doors. All interested may safely add this fine variety to their collections.—H.

**Rose Blanche fleur** (Hybrid Gallica).—It is rather surprising that these white summer-flowering Roses are not more in request. Their earliness commends them to all who have large demands for white flowers, for they come with the Pinks and the Pæonies, and are always welcome. Perhaps one cannot say the above Rose is pure white, there being a distinct shade of flesh colour in the flowers, but for all ordinary purposes it may be used as a white Rose. This variety flowered with me this year quite a week earlier than Mme. Plantier and Mme. Hardy grown under the same conditions.—E.

**Rose Rosomane Alix Huguier.**—At present this novelty has attracted little attention, but I think it deserves notice. It is evidently a seedling from Lady Mary Fitzwilliam, and by many rosarians it might be considered too much like that variety; but let anyone compare the two together, and he will quickly discern a decided difference. The flowers of the Rose under notice have a distinct buff shading, and they are much higher in the centre than those of Lady Mary Fitzwilliam, the reflexed edges of the petals seen in Lady Mary Fitzwilliam giving place to a perfectly pointed, globular-shaped centre in Rosomane A. Huguier. The flowers are of enormous size and have a peculiar appearance upon such a dwarf plant, for, unfortunately, it has inherited its very moderate growth from its parent. I am hopeful this defective habit of growth will be quickly remedied, as we already have instances of improved vigour by hybridisation in the offspring of Lady Mary Fitzwilliam, as evidenced in those superb varieties Souvenir du President Carnot and Antoine Rivière.—W. E.

### ROSES AT PORTSMOUTH.

THE extra early date of the first National Rose Society's exhibition for 1897 had a bad effect upon the number of exhibits at Portsmouth on June 18. In several classes there were no competitors, and in others only one or two. It was the smallest show yet held by this society, and only containing 1660 blooms from some three dozen or so exhibitors. But we saw some good quality both among the Hybrid Perpetuals and Teas. As a proof of the scarcity of good Roses at this early date, such prominent growers as Messrs. Harkness and Sons, E. B. Lindsell, O. G. Orpen, H. Machin, the Rev. Foster-Melliard, and others were absent. Colchester, Oxford, and Torquay provided the best exhibition flowers among trade classes, and there were excellent garden Roses from Bath, Colchester, Cheshunt, Oxford, and Leatherhead.

The medal blooms were Mrs. John Laing and Lady Mary Fitzwilliam among Hybrid Perpetuals and Hybrid Teas, Mme. de Watteville and Comtesse de Nadaillac winning in the Tea and Noisette sections. The chief amateur prize, also the two silver medals, were awarded to Mr. Mease, gardener to Mr. Tate, Leatherhead, for a box of twelve, consisting of Mme. de Watteville, Rubens, Caroline Kuster, Mme. Cusin, Catherine Mernet, Comtesse de Nadaillac, and Souvenir de S. A. Prince (Teas), with Mrs. John Laing, Hippolyte Barreau, La France, and Jeannie Dickson among the H. P.'s and H. Teas.

Some reference must be made to newer varieties. Tom Wood is a grandly formed H. P., of a clear cherry red, and one that retains its freshness and shape for a long time. Mrs. R. G. Sharman-Crawford was staged in splendid form. A pretty pink and salmon sport from S. Marie Rodocanachi was staged in Mr. F. Cant's box of forty-eight varieties. It is a very promising and distinct Rose, but it was the unfortunate cause of Mr. Cant's disqualification, new Roses not being eligible until either properly named or in commerce under a recognised cognomen. A box of Laurence Allen from Messrs. Cooling and Sons, also their new pillar Rose, Purity, were much admired. The former I have described quite

recently, but Purity is newer. This is a pure white when fully opened, of fair size, grand shape, borne in large trusses, and evidently a very free bloomer. H. P. Rev. Allan Cheales, from Messrs. Paul and Son, Cheshunt, is quite distinct in colour, a pretty rosy purple, clear, and well built up, but rather thin in petal as here shown.

By far the best show was made by garden Roses. These were really good, both trade and amateur stands being in grand condition. Among the very best I noticed Ma Capucine, Janet's Pride, Austrian Copper, Maiden's Blush, Polyantha simplex, Rainbow, Lucida plena, Grandiflora, Hebe's Lip, Royal Scarlet, Harrisoni, Crested Cabbage, and Moss Cristata. R.

**Yellow Roses.**—To make yellow Roses deeper in their tint of colour I recently noted a plan new to me. The variety was Perle des Jardins, a Tea-scented kind in great demand in the cut state, the blooms of which were almost white in colour through the heat of the sun under glass. The flowers were cut in the bud state during early morning, placed thickly in bunches in water and put into a dark cellar. By the following evening the change was surprising; and twenty-four hours after they were cut I saw the same blooms in the market quite a deep yellow in tint. They were readily purchased, being considered highly coloured. Whether it would affect all yellow Roses I do not know, Perle des Jardins being exceptional in many ways. It has flowers of rare substance and will put up with sprinkling with impunity. Water will spoil the petals of many Roses with light tints. It appears to be the yellow for market, no other kind seeming to provide such an abundant crop of nicely-formed blooms.—H. S.

**Rosa levigata.**—I notice that on p. 384 the large single white Rose, blooms of which I sent up from Kingswear, has been provided with a name—Rosa levigata. I find in the "Gardener's Dictionary" that Rosa levigata is synonymous with Rosa sinica, which hails from China, and has the date 1759 against it; both seem to have an American name—the Cherokee Rose—applied to them, though why this should be if they have a Chinese origin it is difficult to imagine. R. sinica grows freely on the shores of the Mediterranean, but is, I fancy, from specimens I have seen, smaller both in flower and leaf than the South Devon specimen now under notice. Perhaps, however, those who have a greater experience of R. sinica have seen flowers of that variety 5 inches in diameter. I hope next year to be able to compare a R. sinica brought from Mentone and now growing at Torquay with the Kingswear R. levigata, which was sent to England from Abbotabad, in N.W. India. On further examination of the foliage of R. gigantea, I detect a difference to that of R. levigata.—S. W. F., Torquay.

**Roses with coloured foliage.**—Not the least of the many charms of the Tea-scented, China and kindred classes, especially of modern varieties, is centred in their matchless ruby and bronze foliage. One could truly say that the young growths of all Roses are beautiful, but the classes named excel all others in this quality. Even among the Teas and allied classes some varieties are more richly coloured than others, and their effectiveness might be serviceably employed to produce during the summer, in conspicuous positions, a mass of rich foliage in addition to their beautiful flowers. The following varieties are more or less conspicuous for their grand foliage: *Chinas*: Cramoisi Supérieur, Fabvier, Queen Mab, Mme. L. Messimy, Mme. Eugène Resal. *Teas*: Sunset, Perle des Jardins, Devoniensis, Perle de Fen, Beauté Inconstante, Duchesse d'Auerstadt, Mme. Berard, Waltham Climber No. 3, Sylph, Bouquet d'Or, Souvenir de Mme. Sablayrolles, Souvenir de Catherine Guillot. *Hybrid Teas*: Captain Christy, Bardou Job, Grace Darling, Belle Siebrecht, Cheshunt Hybrid, Mme. Jos. Combet, La Fraicheur, Gloire Lyonnaise. *Noisettes*: Fellenberg, Mme. Pierre Cochet, Réve d'Or. *Hybrid Perpetuals*: General Baron Berge,

Lord Bacon, Grand Mogul, Empereur de Maroc. *Hybrid Chinese*: Blairi No. 2. *Scampervirens*: Flora. *Hybrid Ayrshire*: Mme. Vivand Morel. *Microphylla*: Ma Surprise. *Boursault*: Gracilis. *Bourbon*: M. A. Maillé, Souvenir de Lieutenant Bujon, Gloire des Rosomanes, Sir Jos. Paxton, Rosa Brunoni, R. rubrifolia.

**Colour in Rose William Allan Richardson.**—Much has been written of late concerning the varying colour of this favourite Rose. When first sent out many had the impression that it was delicate and required a wall. This, however, was a delusion, as it thrives in many cold and exposed situations. What it likes is a free and unrestricted growth, resenting severe pruning; and my experience is that trees on walls that are annually spurred back somewhat rigidly, in order to keep them within bounds, produce not only the fewest, but the most inferior coloured blooms. Grown on its own roots, planted where it has an opportunity of rambling, and no further pruning done than the unripe tips of the growths shortened and weak shoots removed, together with what old wood can be spared, is the way to get the best results, the long one-year-old arched growths being literally covered with good-sized blooms of the deepest orange. It seems to enjoy a good holding loam.—GROWER.

—I have read "S. W. F.'s" note in THE GARDEN (June 26) on "Lack of Colour in W. A. Richardson Rose," and beg to say that one of my neighbours has this Rose in full bloom, all the flowers in beautiful colour, except those about to drop. The flowers remind me of those of a Rose I saw in the south of the United States; the grower did not know the name, but because of its rich colour it was called the Brown Rose. The flowers differed from those of W. A. Richardson in being very dark on the outside, brown, tinged slightly with red, and lighter inside. I sent cuttings of it to my garden (we then lived at Newport, Rhode Island, U.S.A.). The flowers were beautiful for a year or two, and then lost their colour.—M. CROFT, South Park, Wadhurst, Sussex.

#### NEW ROSES AT THE CRYSTAL PALACE.

THE number and quality of the new Roses at this meeting of the National Rose Society were so marked, that a note on a few of the best, for the benefit of those unable to attend, may be valuable. Limiting myself to twelve—the six best already in commerce and the six which had the most promising appearance among those shown for the first time—I must commence with

**MURIEL GRAHAME**, a grand sport from Catherine Mermet, which has already given us The Bride, Waban, and Bridesmaid. Muriel Grahame won one of the silver medals, that for the best Tea or Noisette throughout the whole show in amateurs' classes. It would have done the same even if the many trade collections had been included. In every way it is a grand example of a creamy blush form of Catherine Mermet. At first it did not come sufficiently full with many to be of great promise, but no one could find any fault with the magnificent flower staged in Mr. E. B. Lindsell's champion trophy stand.

**MAMAN COCHET** is another Tea, and I believe, the only seedling from Catherine Mermet. It is of grand size and form, a capital grower and free bloomer, quite unique in its deep salmon and coppery-peach shadings.

**MRS. W. J. GRANT** has often been described, but now that much of the weakness from excessive propagation has departed, we are seeing it in that beautiful form possessed by one bloom at Chester in 1892. A freer bloomer we do not possess, while every bud is useful from the very earliest stages. The colour is a deep pink, buds long, and blooms well formed.

**MRS. RUMSEY** is one of our best late pink Roses. It is absolutely mildew-proof so far as I have grown and seen it. The presence of deep green foliage free from this disfiguring disease is a great desideratum towards the end of the sea-

son, and it is then that this Rose is in much better form than when staged at the Crystal Palace.

**TOM WOOD** is perfect in shape, size, and habit of growth. The flower lasts a long time and retains its deep cherry-red colour well.

**HELEN KELLER** is a thoroughly reliable exhibition Rose, and is also a grand variety in the garden. It is a clear rosy cerise.

Of Roses not yet in commerce, a Hybrid Perpetual named

**ULSTER** won the much-coveted gold medal. This is a vigorous grower, with smooth wood, and evidently a very prolific bloomer. There is much of the deep salmony-pink found in a bright Caroline Testout, with a distinct edging of silvery pink. Substance and form are really excellent, and if it will open well we have a grand addition to salmon-pinks.

**KILLARNEY** appears to be a Hybrid Tea. To my mind it was better, more distinct and taking than Ulster, but it was not staged for the medal, and no ground plant was exhibited. I understood Mr. Dickson, Jun., to say it was a promising Rose, of good habit and free-blooming. It is certainly a most fascinating shade of salmony-peach, with clear silvery edges, of grand form, good size and substance.

**BESSIE BROWN** is a pale salmon and cream, a most promising Rose in every way.

**MRS. GRAHAME** also promises well. It is a flower with much the same form and shades of colour as might be imagined from a combination of Mme. Bravy and K. A. Victoria. These four came from Messrs. Dickson, Newtownards, who are evidently likely to outdo all other growers in the matter of new introductions.

**MRS. F. CANT** is a very pale coloured form of Gabriel Luizet. It seems distinct, and was well shown among new Roses and as twelve of any one variety. The growth is shorter than in G. Luizet and rather more robust.

**R. B. CATER**, from Messrs. Cooling and Sons, Bath, has much of the rosy-cerise found in Helen Keller, is of more cupped form, distinct in growth, and a very promising new Rose.

If I mention Golden Gate, Mrs. Mawley, Rev. Allan Cheales, Countess of Caledon, Lady Clanmorris, Daisy, Sylph, Eileen, First Cross, Antoine Rivoire, Laurence Allen, Bladud, Captain Hayward (good), Clio, Mrs. W. C. Whitney, Comtesse Dusy, and T. B. Hayward, I think the pick of new Roses as seen at the Crystal Palace are included. RIDGEWOOD.

**Rose Baroness Rothschild.**—This delicately coloured pink Rose still remains a great favourite amongst all classes, and no wonder. In symmetry it far outstrips the well-known La France, which must be caught in the half-expanded bud stage to be presentable, especially if the blooms are wanted for exhibition. The Baroness is of sturdy growth and soon makes large bushes if mulched and liberally fed. La France stands an exposed situation as well as any Rose I know, and this fact is a strong recommendation. I have it in an eastern flower garden fully exposed to every gale, and in vigour of growth and the way in which it survives severe winters it surpasses the generality of Hybrid Perpetuals growing in the same position.—GROWER.

**Rose S. M. Rodocanachi.**—This splendid Rose should be in every collection, being a hardy, robust, and exceedingly free bloomer. The trusses—for it rarely throws solitary flowers—are borne on extra stout growths, five or six grand half-expanded buds being often obtainable on one shoot. I can confidently recommend this Rose for planting in light shallow soils on account of its vigorous habit of growth, which withstands drought well. On account of its clustering habit of flowering it may not be so useful for cutting or exhibition, as the use of the knife means a sacrifice of numerous smaller buds; but for making a brave show in bed or border few can beat it.—GROWER.

—This is a superb variety, and the exhibitor should take care that a goodly number of plants

is grown, as it is a good reliable kind. It was well exhibited last week at the Drill Hall, and also at the Crystal Palace. Both the fine globular form with the showy guard petals and the charming and lively rose colour are very attractive. I cannot altogether recommend it for garden decoration. It has the fault of Marie Baumann in hanging its head and thus hiding its beauty from view.—P.

**Rosa alpina and its variety R. a. pyrenaica** both form pretty masses of colour in the rock garden, where they may be used as a sort of background. Smaller and younger plants may be used in the fissures of the rock, where they may rest their heads on a projecting ledge of stone. By confining the plants to pots it is possible to keep them quite dwarf for some years, and even in this way they are pretty, with their solitary blossoms of rosy pink.

**Rose Robusta** (Bourbon).—One often bears expressions of regret that Crinon Rambler is not autumn flowering. The above Rose supplies the long-felt want of a grand vivid crimson autumnal variety. It is exceptionally vigorous and will make enormous shoots 7 feet to 8 feet long each season. The colour is as rich and velvety as in Duke of Edinburgh, and the flowers, if not so large, are nevertheless most abundantly produced. The reddish wood and leaf-stalks are also very beautiful. I can highly recommend it as a pillar or climbing Rose.—P.

**Roses Hebe's Lip and Reine Blanche.**—These two Roses appear to be identical. I believe the latter was sent out as an improvement on the former, but I have them almost close to each other and I can discern no difference whatever in the two kinds. Hebe's Lip is a delightful Rose, and is evidently closely allied to the Damasks. It is single, or perhaps one should call it semi-double, as there are two rows of petals. These petals are ivory white, but the great attraction is the beautiful carmine edging which is seen upon the outer and sometimes upon the inner row. It is a strong growing variety, with dull green foliage and very prickly wood. The flowers are produced in clusters of five and six.—P.

**Seedling Roses.**—It was the general opinion of those who saw at the Drill Hall the collection of seedling Roses from Lord Penzance that he was making very slow progress towards enriching our collections with good permanent varieties. Although some of the kinds put up were very pleasing in colour, the only conclusion I could come to was that he was only reproducing varieties and forms which have appeared and been discarded long ago. I am confident that if Lord Penzance would work upon these seedlings with their hybrid nature, in two or three generations some good enduring varieties would be the result, instead of our already extensive collections being burdened with worthless kinds, such as some of those which have already appeared.—P.

**Rose Medea.**—This grand Tea Rose has been seen very fine this season, and it is gradually taking its place among the leading exhibition Teas. Both at the Drill Hall and also at the Crystal Palace last week Mr. Orpen, of Colchester, put up some fine specimens that recalled in the beautiful colour and substantial flower that almost forgotten Rose (loth of Gold. The growth of Medea is not climbing, but it is very vigorous, after the style of Marie Van Houtte, and as it is such a very full flower, doubtless a low wall would be the best position in which to grow it. At the Temple show the raisers—Messrs. W. Paul and Son, of Waltham Cross—exhibited some very fine flowers growing on standards, proving it to be a valuable kind for greenhouse culture.—P.

#### SHORT NOTES—ROSES.

**Rose Jean Cherpin.**—Purple Roses are generally disliked, and perhaps when dying off the blossoms are not very beautiful, but I think that no one would object to the lovely buds of this Rose which are so freely produced. It is a splendid variety to

grow to furnish large supplies of eut flowers, and when judiciously intermingled with pinks, whites, and crimsons, the colour is not at all objectionable.—P.

**Rose Abel Carriere.**—This is one of the most reliable of the very dark Roses. It is certainly far superior to such kinds as Jean Liabaud and Baron de Bonstettin, which yield a good flower very rarely. The splendid colour of Abel Carriere is always welcome in a collection, the rich velvety maroon contrasting well with paler tints. It is a good grower and the form of flower excellent; in fact, I consider it the best all-round dark Rose we possess.—E.

**Roses Marquise de Salisbury and Camoens** as standards.—Probably one could not select two more effective Roses to grow in standard or half-standard form than the kinds named above. They appear to vie with the Monthly Roses for continuous blooming. A grand display would be ensured if these two varieties were extensively planted either in conjunction or separately. The vivid crimson of Marquise de Salisbury would at all times serve to enhance the lovely pink of Camoens.

**Rose Thomas Mills** is a brilliant crimson, vigorous growing Rose. Its form is perfect, and

the Drill Hall, is a near ally of the Weigelas; indeed, by our botanical authorities the genus Weigela is now absorbed into that of Diervilla. The Weigelas, however, as represented by the old-world species and the innumerable hybrids raised therefrom, will in most cases retain the name that they have so long been known by, and under which they have attained the great popularity that they bear at the present day. The plants to which the name of Diervilla has always been applied are *D. canadensis* and *D. sessilifolia*, both natives of North America. The older of the two, *D. canadensis*—which is also known by the specific name of *trifida*—was introduced as long ago as 1739. It forms a somewhat spreading bush a yard or more high, with Weigela-like foliage and small yellow blossoms, which are borne during June and July. *D. sessilifolia*, which is a native of Carolina and Tennessee, is decidedly more ornamental than the other, the leaves being larger and more pointed, and when first expanded they are yellowish, but when mature become somewhat flushed with red when in full sunshine.



*Pentstemon Scouleri* in the rock garden at Abbotsbury. From a photograph sent by Messrs. R. Veitch and Son, Exeter. (See p. 38.)

although it is generally deficient in fulness, it may nevertheless often be found in exhibition boxes. This variety is by no means a shy bloomer, but I would recommend that at pruning time the growths should be left fairly long. It would be a fine kind for a pillar Rose or as a standard.—E.

**Rose Magdeleine de Chatellier** is a fine addition to the popular Polyantha class. It is quite distinct from Perle d'Or and Etoile d'Or. The colour is saffron-yellow, shaded with rosy buff, and the charming little buds expand to beautiful imbricated flowers that are highly attractive. Provided the colours are distinct and their Lilliputian character is retained, one cannot well have too many of these pretty little Roses, so useful are they.—E.

**Diervilla sessilifolia.**—This interesting but uncommon shrub, which was recently shown at

The flowers are yellow, and borne for some time during the summer months. Not only is this shrub well worth growing for its own sake, but in conjunction with the garden varieties of Weigela it may in the hybridist's hands give us some distinct forms.—T.

**Halimodendron argenteum.**—By July a great many of our flowering shrubs are past, but among those still in bloom the above-mentioned Halimodendron, known also as the Siberian Salt Tree, merits recognition, for it is decidedly ornamental, and quite distinct from anything else in flower. It forms a freely-branched bush, 6 feet or so in height, whose slender shoots are clothed with silvery-grey leaves, which impart to it quite an uncommon appearance. The pea-shaped blossoms, which are of a rosy-purple colour, are borne for some distance along the slender arching shoots, and a succession is kept up for some time. This Halimodendron is perfectly hardy, will hold

its own better than many other shrubs in hot sandy soils, while it vies with the Tamarisk in its ability to withstand the salt spray in the immediate vicinity of the sea. It is an old inhabitant of our gardens, but one rarely seen, though far more worthy of a place than many subjects which are generally planted. The silvery character of its foliage is more pronounced when exposed to full sunshine than if the plant is in a partially shaded position.

GARDEN FLORA.

PLATE 1127.

HYBRID CINERARIAS.

(WITH A COLOURED PLATE.\*)

THE accompanying plate represents three of the colour forms obtained in the Botanic Gardens, Cambridge, by crossing *Senecio multiflorus* (female) with the well-known florist's *Cineraria*. They were selected by the artist as the most beautiful from about half a dozen, all of which fairly repeat the colour of the pollen parent used in each particular case. The colours of the *Cineraria* have been so transmitted that white centres are perfectly pure and not in the least affected by the rosy-lilac of the female parent, while the selfs of blue, purple and maroon are bright and clear, though with brilliancy toned down to some extent. It appears, indeed, that the *Cineraria* always carries a strong influence in colour and size whatever the other parent may be, and whether used as male or female. The plants of this cross reversed were also very beautiful, but the habit was not so good and the general result less satisfactory from a decorative point of view. To the artistic eye, and in the opinion of all who are not enamoured of the florist's ideal, the hybrids depicted in this plate are far more beautiful than the garden *Cineraria*, having a lightness and grace of habit which do not belong to the latter, while possessing at the same time an equal beauty of colour. The graceful sprays are very suitable for cutting and look extremely well in water. They have conveniently long stems, and are elegant because all the flower-heads have sufficient space to be seen properly, which in the dense head of an ordinary *Cineraria* is hardly the case. In these hybrids the advantage is gained of a greatly extended flowering season. The plants may be cut back or the first branches of the inflorescence may naturally exhaust themselves, when below new growths appear and produce a fresh crop of flowers. Although the garden *Cineraria* does this to some extent, the habit is much stronger in *Senecio multiflorus*, and from this species it has been transmitted to the hybrids. In general habit the plants are very nearly intermediate, but much depends on culture, for small useful plants may be obtained in 6-inch pots, or they may be grown to be quite 3 feet high. All grow very freely, and, though quite as liable to greenfly as the *Cineraria*, may be regarded as less exacting in general treatment. They appear to have gained by the constitution of the female parent. In comparison with many plants these hybrids are shy seeders, but there will be no difficulty in the hands of those who seed the *Cineraria*. A selection of these hybrids was exhibited at the Drill Hall in January, and though all were much admired, the rosy form (most fully represented in the plate) was generally considered the best. The plants commenced to bloom some time before Christmas,

and some of the same batch are still in flower at the end of June. For purposes of identification it may be said that these hybrids are called *Cineraria Lynchei* by Mr. Watson in the *Garden and Forest* of February last.

Other species besides *S. multiflorus* with which the *Cineraria* has been hybridised in the Cambridge Botanic Gardens are *Senecio Heritieri* (female) and *S. eruentus* (male). A plant of the first has been exceedingly charming, producing on many stems with small leaves a number of large pure white flowers. Of the second cross were many beautiful plants, and one in particular, quite different from all the others, made a magnificent object. Below was a conical mass of large densely-set leaves, and above a



*Senecio multiflorus* x Garden *Cineraria*. Height of plant above pot, 2 feet 6 inches. From a photograph sent by Mr. R. I. Lynch, Botanic Gardens, Cambridge.

panicle of large maroon-coloured flowers about 2½ feet across, the entire plant being not quite 3 feet high.

R. IRWIN LYNCH.

Botanic Gardens, Cambridge.

**Veronica lycopodioides.**—This minute shrub of 3 inches to 4 inches is flowering fairly well this summer on the older and more exposed specimens. The form and pose of the flowers are pretty but common in the better-known dwarf shrubby species, but the peculiar foliage as implied by the specific name lends itself as a foil to the flowers in such a manner that the specimens are distinctly attractive. As a rock garden subject this is decidedly first-rate.—J. W.

THE WEEK'S WORK.

HARDY FRUIT GARDEN.

**PEACHES AND NECTARINES.** Since last writing about these, the trees have made excellent growth, and they are also keeping clean. As it is important in outdoor Peach culture to have the wood well ripened, the young shoots must be kept well fastened back to the walls. While this is being performed, attention should be directed to the stopping of lateral shoots, also to see that none of the fruits are likely to be injured through being in too close proximity to wall nails or wires, cutting away any ties which are already beginning to encircle branches too tightly. The crop, where necessary, should be finally thinned, and

wash the trees as often as circumstances will allow to keep the foliage clear of red spider. The latter pest is more to be dreaded than aphid after this time of the year, and once it gains a good hold on a tree it is almost impossible to eradicate it; hence the wisdom of giving the trees a daily wash, for they cannot endure cold water. Border waterings will entirely depend on the amount of rainfall and the nature of the soil in each locality. When needed, give sufficient to soak the border throughout, and assist all well-cropped trees with a stimulant either in the form of liquid or an artificial manure. Barren trees should not have too much moisture supplied to the roots, and so long as they keep clean and free from spider withhold the water-pot or hose as the case may be. Give young trees every attention in the way of pinching back the strong shoots to equalise growth, and train and tack in the remainder. If any of these are newly planted, see that they do not want for water at the roots.

**APRICOTS.**—These, like the foregoing, are making free growth and stand in need of another look over, as the breastwood and laterals will soon run away with the nourishment needed for the support of the fruits, which are now taking their final swelling. The tree should therefore be closely stopped, and the young wood

previously laid in must have further support in the shape of nails and shreds to prevent it from hanging loose and presenting an untidy appearance. Now that the fruits are swelling fast see that the trees do not want for moisture at the roots, as if the borders are well drained it is almost impossible to overwater Apricots. It is this deficiency of root moisture which causes so many fruits to be mealy or, at any rate, deficient of juice when ripe. When once the final swelling commences water is needed in ample quantities, unless the rainfall should prove sufficient—which is seldom the case with me—to enable the trees to lay on plenty of pulp. Follow up the daily washing of the trees, if only to keep woodlice from effecting a lodgment in old walls, as these soon spoil the best fruits and

\* Drawn for THE GARDEN by H. G. Moon in the Botanic Gardens, Cambridge. Lithographed and printed by J. L. Goffart.

those nestling close to the wall if left unmolested. Some growers move the leaves on one side to expose the fruits when they commence to ripen, but it is a practice I cannot recommend, as it leads to the portion of the fruit facing outwards becoming ripe in advance of the base. I always find that the fruits ripen more regularly and thoroughly when slightly shaded by the foliage, and have discontinued exposing them to the sun for some years past. Renew the mulch on the border if necessary, as we may yet have more hot, parching weather to contend with. Young trees in full growth and devoid of fruit must not be given stimulants, which older trees require, and, if growth is inclined to be rank, give no more water at the roots than is necessary to keep them in a healthy condition.

**WALL PEARS.**—Where the stopping of these has been delayed no time should be lost in getting it done, and if the trees have made an excessive amount of growth, and disbudbing has been neglected, twist or pull out the surplus shoots at the base. This enables weak and watery shoots being got rid of, to the benefit of those retained. These latter, with the exception of leaders at the ends of branches in fan and diagonally-trained trees, should be stopped back to four buds. In the case of cordons the same amount of stopping is required, leaving the leaders full length if the trees are young and have not filled their allotted space. The majority of the trees are carrying good crops here. It is surprising how quickly Pears develop and to what a size they attain when fed with superphosphate of lime and muriate of potash, and there are no other manures that I am acquainted with which have such a marked effect when judiciously applied. Heavily-laden trees should be thinned, although if there are any doubts in the matter it would be better to wait another week or so; but, generally speaking, the best and most healthy-looking fruits can be quickly discovered after the month of June is past. Should hot, dry weather set in, renew the mulch, and keep the roots of the trees moist by watering when necessary.

**PLUMS ON WALLS.**—In many places the crops, it is to be feared, will be short, and in some instances *nil*. Where this is the case the trees must be judiciously handled, otherwise they will make rank growth, which, if continued late in the season, will lead to the trees being unfruitful another season in consequence of the wood being unripened. Stimulants should, therefore, be withheld, and no water given at the roots unless absolutely necessary. The trees themselves must, however, be kept clean, and after stopping the spur wood and tacking or tying in that required for furnishing, give them a thorough washing, and follow it up as often as time will permit. Trees which are bearing must be well fed to enable them to carry as heavy a crop as possible, but if the fruits are too close together a little thinning will be beneficial. Look well after young cordon trees and stop all side growths. This is an excellent way of growing the choice dessert varieties, and it is also a quick method of covering walls and any odd corner on wall buttresses. Nearly all varieties succeed grown in this way, the only exception, so far as I know, being Victoria, which gives but poor returns.

**BUSH MORELOS.**—These are, as usual, carrying heavy crops of fruit, and the trees have made good growth. The points of the shoots should now be pinched out, and where there is an excess of these, a slight thinning may be done. This will obviate the necessity for any winter-pruning. That other fine cooking Cherry, Kentish Red, should also be treated in like manner.

**APPLES AND PEARS.**—These, whether grown as bushes or pyramids, should be summer-pruned. It is many years since the trees made so much growth as they have done this season, and it is healthy and clean. The stopping in this case amounts to the cutting back of the young shoots on the spurs on the main branches to from four to five leaves, and in leaving the leading shoots at the extremities one-third, one-half, or two-thirds

their length, according to the age or the amount of space the trees have to fill. This will allow light and air to penetrate all parts of the trees and aid in the ripening of wood and buds for another season. Heavy crops of Apples will be the exception more than the rule, but still there should be no hesitation about thinning in the case of trees which are heavily laden.

**CORDON GOOSEBERRIES.**—Young trees planted last winter should have the leading shoot tied to the wires, or be fastened back to the wall, and stop in the side growths to two or three buds. Established trees should also be stopped in, only in their case leave from four to five buds.

A. W.

#### KITCHEN GARDEN.

**CABBAGE.**—We have arrived at the time when the first sowing of spring Cabbage should be made. It is a mistake to suppose that one sowing, and at a fixed date, is always going to prove satisfactory, as the plants are apt to suffer from a variety of causes, while, owing to the seasons varying, the plants may be too forward in one instance to withstand a severe winter, and in another so backward that they do not become thoroughly established before bad weather sets in. There is also a risk of losing many of the plants through the attacks of slugs and other pests. To ensure a good supply of first-class heads at a season when they are most appreciated, viz., from early spring until Asparagus and other choice vegetables become plentiful, three sowings at least should be made at intervals of about ten days or a fortnight. Allow plenty of space in forming the beds, so that the seed may be sown thinly, which will enable the seedlings to make sturdy growth, so that they can be planted direct into their permanent quarters without the extra trouble of pricking them off into nursery beds. No crop repays better for generous treatment in the way of well-cultivated soil than this, and to ensure vigorous plants from the first, the seed-bed should be selected in an open position, and if the ground be poor or exhausted by a previous crop, a dressing of thoroughly decayed manure, or, what is preferable, a dressing from a spent Mushroom bed, should be afforded and forked in rather deeply. After the ground has settled, the first sowing should be made broadcast, well covering the seed with fine soil from the frame-yard; the next sowing may be made in a similar way, but I prefer to raise the last batch of plants in drills, as many of these will remain undisturbed through the winter and prove valuable for planting out in the spring. As these seeds have to be sown when the ground is generally in a parched condition, frequent watering is not only necessary to assist the seed to germinate quickly, but also to sustain the young plants until they become well established. Net the beds over to prevent birds doing any damage, and thus save loss of time and plants. A slight dusting of slaked lime will ward off slugs and other vermin. As regards varieties, most growers rely on those which have proved suitable to their climate, but there are few gardens now where Ellam's Early does not find a place. At least three varieties should be sown, which will not only allow of a good selection being made, but there is the advantage of a succession of young tender heads being maintained, which is a great point to study with this crop, as they soon lose flavour when they become large and coarse.

**CELERY.**—More trenches should be made as soon as ground becomes available, so that the late batch of plants can be got in before they become too large. The weather of late has been favourable for those that have been recently planted, as well as causing the earliest plants to make rapid growth. Continue to draw a little fresh soil round the plants as they require it, which is better than banking them up with a great quantity at one time. After the desired number of plants has been put out, those that remain in the nursery beds should be watered and in other ways encouraged to grow freely, as these

will prove valuable for the kitchen and save digging from the trenches.

**SALADS.**—Continue to sow Lettuce seed about every ten days. With the exception of the earliest lot of plants, I have not transplanted any of these this season, as by sowing the seed broadcast and thinly, this extra labour is dispensed with, the plants receive no check from transplanting, and they turn in quicker. The site selected should be one where the plants do not receive the full force of the sun at mid-day, and they will last longer in a serviceable condition. Radishes, Endive and Mustard and Cress should also be sown at short intervals, as these are always more appreciated when used in a fresh young state.

**MISCELLANEOUS.**—Many of the early crops, such as Peas, &c., will now be over, and all remains of these and other things should be cleared off the ground as soon as possible, thus preserving a tidy appearance in the garden and the land from unnecessary impoverishment. Take the earliest opportunity also to manure, and get the same in a suitable condition to receive succeeding crops.

R. PARKER.

#### KITCHEN GARDEN.

##### GOOD AUTUMN LETTUCE.

FOR many years I relied upon All the Year Round for autumn sowing, but it is not always reliable, and few varieties will compare with the Hammersmith Hardy Green for August sowing to stand over the winter and furnish an early spring supply. I am aware even the Hammersmith is not hardy in our erratic climate. I have lost quite as many plants from continual rains, but the severe east wind after frost withers up the tender leaves, and the plants collapse. Few things are more appreciated in March and April than early Lettuce, and to obtain these one must not be niggardly in sowing in the early autumn. I am aware there are other kinds equally as hardy as the one named. A favourite Lettuce of late years with me has been Lee's Immense Hardy Green; I think the term "Immense" may be left out. It is an excellent variety, as hardy as the Hammersmith Hardy Green, growing freely in well-drained soil, turning in quickly in the spring, and of good quality. Another very fine type of autumn Lettuce is Stanstead Park. This is quite distinct from those named above, and excellent for autumn sowing. It is very hardy and a rapid grower in the early spring—indeed, earlier than Lee's Hardy Green—of compact habit and a beautiful light-green colour. Of Cos varieties the Hardy Bath or Brown Sugar-loaf is difficult to beat, and one of the best for winter and spring supplies of Lettuce. It follows the Cabbage varieties, and may be sown in August, as large plants do not winter well. A new variety I tried last season proved an excellent winter and spring Lettuce. This is a small kind—Sutton's Intermediate, a cross between a Cabbage and Cos, more upright in growth than the Cabbage, but hardier and earlier than the true Cos. The plants have scarcely any leg or stem, being close to the soil. It resembles in colour the old Bath Cos, but is quite distinct, being much smaller. Winter Green is also good, hardy, and distinct. I have less liking for Cos Lettuce for spring use than Cabbage Lettuce, as earliness is essential. An Early Cabbage Lettuce sown in February is nearly as early as the autumn-sown Cos; on the other hand many prefer Cos. It is useless to sow for spring supplies in places where slugs or snails abound, as these pests soon clear a quarter, and I prefer an open bed to that on a south or warm border, as the plants are more hardy and less

njured by cold. A well-drained soil is a necessity for the plants, and thin sowing is needed to give the seedlings room to grow. I find raised beds in an open exposed quarter give the best plants for early spring planting. I am aware the plants are much earlier when planted out in autumn, but owing to losses I do not advise planting largely. I have obtained early produce by sowing thinly in rows on a south border and not transplanting. I prefer to sow broadcast in beds when quantities are needed in spring, transplanting at the end of February or early in March to warm borders.  
G.W.S.

**Gradus Pea.**—I trust I made it clear in referring to Gradus Pea that my experience of it was in a very exposed place, out in a large field and under field culture. At Richmond, where the soil and situation both are warmer, it has done better, but still in neither case is it so good a cropper as Ameer, which is at the most but two days later. As an early warm border Pea there can be no doubt that Gradus is a valuable requisition. Even for that purpose, however, I should like it better were it shorter-jointed. At Richmond still under field culture I have found Bountiful, A 1, and Empress of India to be all capital first earlys, about 3 feet in height, and good croppers; indeed, it is now absurd to sow labourless round earlys.—A. D.

**Very dwarf Peas.**—How very popular American Wonder still is with many persons for first early sowing in rows at 20 inches apart. It necessitates no expenditure of money and labour in staking, gives really good gatherings of pods, and can be if needed intercropped ere finally cleared off. William Hurst and Chelsea Gem sown in rows 2 feet apart are even better and more productive. Then also at 2 feet come Daisy and Dwarf Defiance, both really first-rate dwarf Peas, cropping wonderfully. English Wonder has smaller pods, and may be sown even rather closer, but the crop and quality are first-rate. I find this Pea also in commerce as Witham Wonder. A fine podding Pea of this section is Early Dwarf Marrowfat, and there is no better late dwarf than Omega. Those who grow these short varieties will find they get as fine Pea quality from them as from the tallest.—A. D.

**Young Carrots for winter.**—There is no difficulty in having a good supply of Carrots in winter, but my note refers to young roots. Now is the time to sow for winter supplies, and the best varieties are the stump-rooted kinds, those one usually sows in the early spring, such as Early Nantes, Early Gem, or a Short Horn. These should be sown thinly in well-manured soil, and should the weather be dry it is well to water to assist the seed to germinate freely. With winter Carrots one must guard against slugs, wireworm, and other pests. The wireworm is one of the worst, and it is well to dress the land before digging with lime and soot, and in soils with a tendency to wireworm gas-lime should be employed. Wood ashes is a splendid fertiliser if this can be used in quantity, and in heavy clay soils the addition of road scrapings, old mortar rubble, or spent manure is of great value. There need be no fear of the crop failing. Carrots are quite hardy, and they are much sweeter when drawn fresh.—G. WYTHES.

**Pea Early Morn.**—I have this season given the above new Pea a trial forced under glass, and as a first early in the open, and consider it a very superior variety, a grand cropper, with splendid flavour. I am obliged to grow early Peas in quantity, and I note "J. C.'s" remarks at p. 4, and would ask him to give this a trial. I feel sure he will place it equal with the one he notes. I find it superior, having a larger pod and being a very heavy cropper. The pod is much larger than that of Springtide, in fact it more resembles the Stratagem type than any I know. Though it is large it is very early. The true Stratagem is not early, in fact more a mid-season variety, and not

adapted for early sowing in cold heavy soils, whereas Early Morn with me germinated freely sown early in February, and was fit to gather the second week in June. These remarks apply to the open-ground crop; those raised in pots were planted out in March, the Peas being fit for use the last week in May. Early Morn grows 2½ feet high. The pods had eight to ten Peas in a pod and of splendid flavour.—G. WYTHES.

**New Peas.**—The fruit and vegetable committee of the Royal Horticultural Society did well at the conclusion of their Pea inspection last year to request that such standard varieties as Chelsea Gem, Duke of Albany, Sharpe's Queen, William I., Autocrat, and No Plus Ultra be grown this year to furnish fair objects of comparison with new varieties. Hence when a meeting of that body was held at Chiswick on the 1st inst., out of some fifty varieties examined the lowest award was given to three varieties, Saccharine, a 4-foot Pea having a fair crop of long green pods; Harbinger, 4 feet, good crop of short pods, an early variety; and to Parchment, one of the French sugar Peas for cooking whole. Something of a really remarkable character is now needed in Peas to command any high award. In what direction it is to be looked for it is difficult to say; crops seem to be now all that are possible, flavour is relatively good too in the best, though not all that can be desired generally. Colour, too, is good, whilst we have all heights. Anyone familiar with Peas knows that average excellence being so good it is very hard indeed to beat it. It is a question whether those who have secured a score or so of the very best varieties now in commerce will not render horticulture more service by constant hard selection of the best forms in each case for seeding, and thus practically improve existing stocks, rather than to waste effort over the raising by intercrossing of new varieties, nine-tenths of which are no better, and many are worse than existing best sorts.—A. D.

#### MANURING ASPARAGUS.

From the end of June till the end of August is, I find, the best time to give manures to Asparagus beds. I have great faith in liquid manure from stables or cowsheds. This given freely is invaluable whilst the crowns are being formed for next season's crop. I am aware many growers prefer fertilisers, but, unless copious supplies of water are given at the same time, it is useless to give dry food which the roots cannot get hold of. Another point deserving of attention is to feed when growth is most active. I am not adverse to manures earlier, say from the beginning of May, if not given to excess; indeed, in light soils there is no better time to apply salt than May and June, if given in showery weather, but it is most injurious given in the late autumn, as I fail to see what good it can do when top growth has ceased and in a measure the plants are at rest. Many good roots in heavy clay soils have been killed by salt dressings in the autumn, also by heavy coatings of manure. If beds could be regularly irrigated from now to the end of August, especially when there are wide alleys between the plants, and the soil gravel, such irrigation would do so much good that manures at other times would be little needed. The best Asparagus I ever grew was on beds on the flat. These I flooded with liquid manure; during growth, no food of any kind was needed. By this system I could cut Asparagus much later; indeed, a few beds were cut well into August, and there was no lack of grass as long as I irrigated freely. I am aware at certain seasons one has a difficulty in finding labour to give all things the proper attention. Fertilisers are so soon applied that they have become fashionable, but I have more faith in abundance of liquid food if it can be obtained and labour found to apply it. There is no better food for Asparagus, and given at the right moment it is soon absorbed and builds up strong crowns, with a strong top growth. It must not be thought I do not value artificial manures. These are most valuable used

as I advise above when the plant is in full growth. Many cannot obtain liquid manure, and the fertilisers are of great value. One I have found excellent is fish manure and soot well watered in. Near dwellings fish manure is objectionable when left on the surface, but when mixed with soot and watered in the strong smell is soon lost. Sulphate of potash mixed in equal quantity with guano is an excellent food. Nitrate of potash given in a soluble state is a quick acting fertiliser, and given as a top-dressing is best applied in showery weather.  
G. WYTHES.

**Potato Sharpe's Victor.**—The discussion on early Potatoes, and Sharpe's Victor in particular, proves that this variety is falling into disfavour. Opinions as to its merits have been divided from the first, and I may say that with me it never was worthy of a place, though I grew a limited quantity of it for some years, but eventually discarded it entirely. The soil on which it was grown is light and sandy, and usually produces Potatoes of high quality, but Victor never would pass as a good variety, either in texture, flavour or colour. The stock was certainly true, so the failure could not be attributed to the reason suggested by "S. H." (p. 4). Some of the newer early Potatoes are proving so good and so productive with me that it seems probable that the older Ashleaf varieties will follow Victor on the discarded list. My first and best early this year was Duke of York, a little-known variety that was first distributed, I believe, by a Norwich firm. This has been in all respects excellent and the crop was enormous. It is a most precocious variety in the way of making shoots in the store room, and it seems difficult to keep it back by any ordinary means. So the coolest storage should be given, or the sprouts will be in great danger of being damaged when planting. Following closely on Duke of York and good at all points with me is Ringleader. This has now had several years' trial, and it has always been good and far ahead of the older Ashleaf varieties as a cropper. The tubers, too, are bigger, and I think that all other early varieties will be discarded here in favour of the two mentioned, unless in the meanwhile some other crops up better than either, which is not probable. While writing of Potatoes, I take the opportunity of referring again to the merits of Snowdrop, which is always first-class here. It is a second early, but should be planted in plenty in preference to too many early varieties, as it has wonderful recuperative powers after having been cut down by frost, a merit which most if not all of the early ones lack.—J. C. TALLACK.

—That there are two or more varieties of Sharpe's Victor no experienced cultivator will deny, the white fleshed being decidedly inferior to the yellow. I am inclined to think there are other spurious Victors in the field. I have seen Sharpe's Victor in an infinite variety of soils and positions, and do not remember a case of failure in the genuine Victor. It is not generally a heavy cropper nor a large Potato, but it is a sure cropper, of high quality, and one of the earliest in cultivation; and then it is so short topped that it may be planted close enough together to yield a fair average crop without overcrowding. Possibly "S. H." overfed his Potatoes, as he confesses that he feeds freely. Immediately under "S. H.'s" note appears that of Mr. Cockerill, with whom Victor does well in pots and outside, who says his soil is very light, in some parts 28 inches from the rock, and that he never manures for Potatoes. The striking contrast on the same page should give "S. H." cause for thought, though he hastened to add, the same culture has not produced such results on older varieties. The same two writers form equally opposite estimates as to Ringleader. "S. H." says it is growing into higher favour and is furnished with more room every year, Mr. Cockerill saying he has grown Ringleader two seasons and is giving it another trial, but if no better than the last two years he shall discard it. Does "S. H." carefully green his seed Potatoes

of Victor and other sorts, and was the fresh seed bought in greened? Last year I heard a complaint of Victor. Inquiring about the seed for planting, I was told that it was all in the heap before me, a small hillock on the floor of tubers almost hidden under green tops. Further inquiry brought out the fact that the stock had been picked over for all the finer tubers to be eaten in the early autumn or winter, the small left for seed, found towards planting time in the state described. Perhaps no Potato benefits more from early and thorough greening of the sets and cool storage in the light in single file than Sharpe's Victor.—D. T. F.

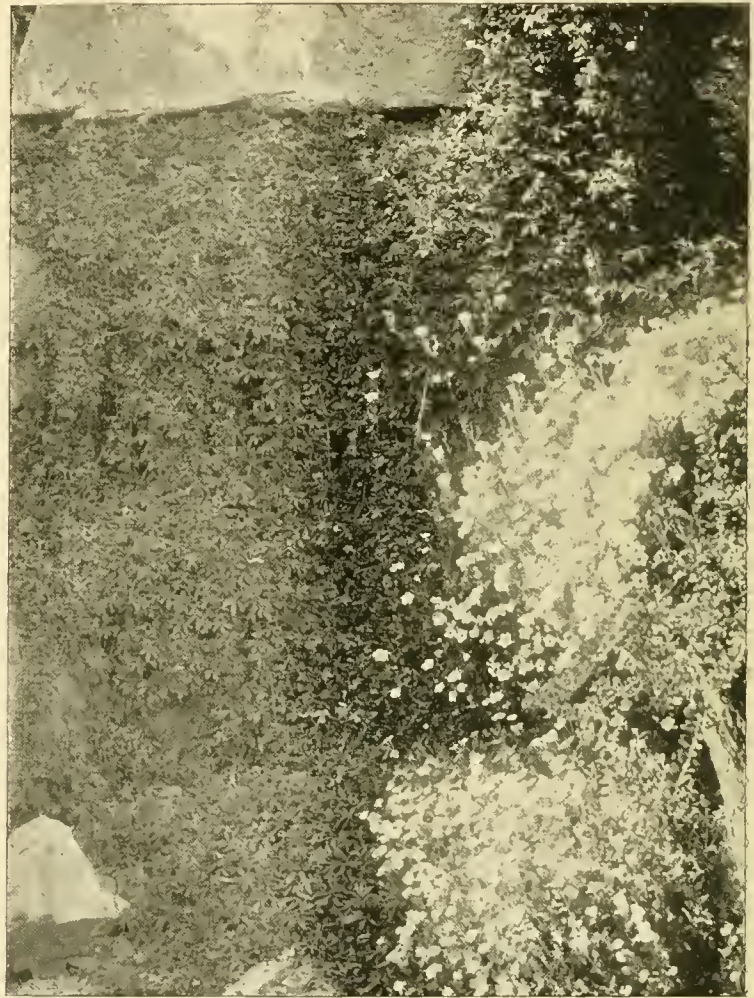
## STOVE AND GREENHOUSE.

### FREESIAS ALL THE YEAR ROUND.

A CORRESPONDENT, "L. P.," inquires as to the treatment and cultivation of these beautiful plants to ensure, if possible, having them in flower "all the year round." We are afraid we cannot hold out much hope of success in this respect, when the most successful growers both in Guernsey and England have to be content with something less than six months as a maximum wherein good flowers may be secured with any degree of certainty. Freesias, in common with all other bulbous or tuberous-rooted plants, have in their native habitat, *i.e.*, the Cape of Good Hope, a fixed season of flowering, that in these islands is merely accelerated or extended according to the means and methods adopted. The largest growers of these plants secure their supplies as early as possible in the summer months, and commence potting or boxing in July and August. Boxing is that mostly in vogue by the market men who cultivate these flowers by the thousand, the Guernsey growers, by their altered circumstances, being enabled to start cutting in November under glass, and from this time onwards till late in spring. Want of sun prevents the English growers obtaining the same results at this season, while later on their produce is highly creditable. The best advice we are able to give "L. P." for prolonging the season to its utmost limit is contained in the following: Plant in successive batches from the end of July to end of October in pots 5 inches in diameter, or boxes 15 inches long, 10 inches wide, and 4 inches deep inside, permitting an opening, say half an inch wide, in the bottom for free drainage. Such boxes will accommodate four dozen large tubers, which when planted should be covered with not more than half an inch of soil. The pots named will each accommodate half a dozen tubers. A good mixture to grow them in consists of fibrous loam one half, to which add peat and well-decayed leaf soil and sharp sandy grit. Well-decayed and rather finely sifted cow manure may be added at the rate of one-fifth part. When planted, the batches may be first well watered, placed on a bed of ashes, and then covered with 2 inches of cocoa-nut fibre. Later planted lots should be treated similarly in all respects, though as the colder nights appear they will be safer for the protection of a frame to keep off excessive wet. It will be well if the whole of what is intended for early work under glass be planted at much the same time, thus encouraging an early and abundant rooting before placing in the greenhouse. With the advent of the latter a light airy position and as near the glass as possible should be chosen, and with increasing growth water must be given without stint. Anything approaching dryness at the root generally ends in failure. A fatal error is often the outcome of stagnant root moisture, due to the placing of the pots in saucers that are rarely dry, for while with a free drainage the water supplies may be abundant, the other extreme will quickly make its own mark. By early potting and subsequent forcing these fragrant flowers may be had for at least six months in succession without scarcely any break. And after this the season may be

perhaps somewhat further prolonged by placing the bulbs in dry sand in a frost-proof shed or cellar for planting in a sunny frame about the middle of February. Such a frame, however, will need some preparation, raising the soil a foot above the surroundings. This could be done on the principle of a shallow manure frame, planting the bulbs in a bed of soil 6 inches deep on the top. Loam, leaf-soil and rotten manure, with plenty of grit, should be the soil used. Make the bed rather firm and plant the tubers nearly an inch deep. It will be better that the soil be sufficiently moist to dispense with any watering at planting time, and afterwards as needed. In case of hard weather, such a frame will need covering. When all signs of frost are past the lights may be removed. A frame 6 feet by 4 feet will take 200 or 300 bulbs, and in this way, provided the prolonged

plants. Five hundred were arranged in one house all in flower, and when it is said that some of the specimens are carrying as many as fifteen fine large blooms, the effect may be imagined. In reply to inquiries, Mr. R. Davidson kindly gave me a short account of his mode of treatment. The layers are secured as early as possible, the first batch now being ready for potting, others coming on in succession. Being thus well established before the winter they are kept well on the dry side in pits and span-roofed houses with as much air as possible kept on and the pipes well heated. The difference in plants that were for a time kept in a rather deep pit and others grown in a light span house is very marked, the latter of course being much more satisfactory. The potting compost is made up of good sound loam, peat fibre and a rather liberal allowance of sharp silver sand.



*Aconononifolia*, forming a curtain 10 feet by 5 feet, in the rock garden at Abbotsbury.  
From a photograph sent by Messrs. R. Veitch and Son, Exeter. (See p. 38.)

season of rest is not injurious to the tubers, you may get some late flowers. We think it well to say from our own experience, under not very favourable conditions, however, that a full measure of success in frame culture is not usually ensured in England, though, treated in the way suggested and similarly to *Ixia* and such things, with due care the prolonged flowering would amply repay the labour entailed. We know of no publication dealing fully with the culture of these plants.—Ed.

**Malmaison Carnations at Culford.**—In few places are these beautiful plants more successfully grown than here, and although the season is getting over, I noted this week a splendid lot of

A little of a good concentrated fertiliser is also allowed, and the pots well drained. The centre of the compost is kept a little higher to throw off superfluous water from the stems and the plants are very firmly potted. The final potting takes place about the middle of January, the pots used being apparently the 10-inch size for two-year-old plants. They are not kept after the second season, and, judging by the appearance of a large batch of last season just gone out of flower, they will be quite large enough. About 2000 plants in all are grown, but this number will probably have to be increased in order to fill a fine new house being erected for their reception.

**Carnation Mrs. Everard Hambro.**—When the first batch of new Malmaison Carnations was

sent out, many were doubtful whether the constitution would be as robust and the plants as free flowering as in the original flesh-coloured form. Experience, however, proves that in this respect they are all that can be desired, while some of the varieties are of the richest and most delicate colours. To my mind one of the showiest and best is Mrs. Everard Hambro. The flowers are of extra large size, massive in form, and of a deep carmine-rose colour, which contrasts most pleasingly with the lighter flowers of the old flesh-coloured form. It makes abundance of grass, so that even from a single stock plant a good number of plants may be secured by layering as soon as flowering is over. The sooner after this the better. Another very vigorous and reliable variety is Sir Evelyn Wood. The flowers are large and massive, having a ground colour of salmon-pink striped with rose. The flowers of the Malmaisons are a little too massive for some people, but they cannot be dispensed with, preventing as they do a blank between the last of the Tree Carnations under glass and the earliest flowering border varieties. A fairly long succession of bloom may be secured from them if a portion of the plants is placed in a comfortable house facing south and the remainder in one having a north outlook. This is a great gain where the blooms are required for indoor decoration. From the time the young plants are potted up in autumn, a cool atmosphere, free from excessive damp in winter, perfect freedom from aphids by occasional fumigations and a good turfy loam, with sufficient grit to keep it porous at each potting, are the main points in their culture.—J. C.

**Eupatorium odoratum.**—There are several varieties of this autumn and winter-blooming plant, the most useful, perhaps, being odoratum. Cuttings are easily struck in a gentle bottom-heat beneath a bell-glass as soon as a few inches of new growth have been made after cutting back old plants in spring. Several may be grown on in one pot, larger bushes being thereby secured in one season with one or two stoppings. A good holding loam, with plenty of open material in the shape of coarse sand or road grit, grows them well; some add a little leaf-mould or even decomposed cow or horse manure, but I think the former compost is best, as assistance can be given when the pots are filled with roots, and unripened growth often fails to produce flowers satisfactorily. Fine bushes may be grown in two seasons in 10-inch or 12-inch pots. Old plants cut closely back in February or March and all weakly one-year shoots removed soon break freely if kept on the dry side and afterwards treated to a comfortable moist house and syringed daily. When the shoots are an inch long, repotting, if necessary, should be done, but good-sized plants will, if well top-dressed and assisted throughout the summer with liquid manure, flower freely for several seasons. In June, after duly hardening off in a frame, the plants do best stood on coal ashes in a sheltered corner, removing under glass again at the close of October. Green fly is sometimes troublesome, in which case remove under glass and fumigate with tobacco paper, or syringe with tobacco water as they stand in the open, laying the plants on their sides during the operation.—GROWER.

#### GROWING POINSETTIAS.

WHAT is the best treatment to procure large heads of Poinsettia? I keep mine through the summer in a cool vinery. I grow two-year-old plants; they always fail with me after taking them into heat. As a rule, the foliage turns yellow and falls off until only the bract is left.—PERPLEXED.

\* \* \* There are several methods of culture by which large bracts are produced. Some successful growers, who propagate annually and bloom the plants in from 4½-inch to 6-inch pots, strike their cuttings say in April. Propagating too early is an evil, as it is then difficult to keep the plants dwarf, as having to keep them in heat and

moisture so long in the spring induces a leggy growth in the first stages. By striking in April the plants get nicely established and ready for a 4½-inch pot in June, when if a pit having a gentle warmth from hot-water pipes is at hand, no better place can be had, giving them a position near the glass and standing the pots on coal ashes. Should the weather prove unusually hot, the pipe heat can be dispensed with, a liberal supply of air being given on fine sunny days. Towards the end of July a shift into a 6-inch pot may be given, using good turfy loam, leaf-mould and a little coarse sand. Towards autumn, as the pots become filled with roots, feeding with weak farm-yard liquid, say three times a week, will be beneficial. Where no pipe-heat exists, the most must be made of sun-heat, and great care used in airing on dull, sunless days, or a check soon occurs. Extra fine bracts are also produced by planting out in a pit or deep frame in June, giving each plant plenty of room and a good larder for the roots, closing early on sunny afternoons and syringing overhead. About the middle of September lift the plants carefully and pot, returning afterwards to the same frame and keeping close and moist for ten days till established. If care is used very few of the lower leaves will fall, and in October removal to a moist house, having a night temperature of 60°, must take place, still keeping them near the roof glass. Defoliation often occurs from defective drainage or too much water, especially liquid manure.—Ed.

#### JUNE IN SOUTH DEVON.

ALTERNATIONS of rain and sunshine have kept the garden flowers growing freely, though some of the taller subjects have been rather battered by the heavier falls. The double white Achillea ptarmica The Pearl has come into fine bloom, and in the wild garden the tall Monkshood (Aconitum Napellus) has reared its blue flower-heads. The hybrid Aquilegias have been beautiful as ever, with their sweeping spurs and faint colour gradations, and a mass of the yellow A. chrysantha has had a pretty effect. The hybrid Alstroemerias came into full bloom at the latter part of the month, and division of the clumps, last autumn, seems to have rendered them even stronger than usual. Their colours, ranging from crimson to faintest cream, create a delicious harmony when the flowers are arranged in large bowls or vases. Alstroemeria aurea is also now in bloom, but its vivid orange blossoms have not the charm of hue possessed by the hybrid section. The delicate Antherium liliastrium (St. Bruno's Lily) and its larger form, A. l. majus, have, with St. Bernard's Lily (A. liliago), commenced their blooming period. The bright blue Anchusa italica, though straggling in growth, is effective when massed, and as it is not particular as to soil or position, can be planted advantageously in out-of-the-way corners. The white Antirrhinum is already in full flower, and is very effective for massing. This strain is always raised from cuttings, being of a singularly pure white and of good habit. Its seed rarely produces white-flowered specimens, and the seedlings are almost invariably coarser in growth than the parent plants. In a neighbouring pond Apogon distachyon has spread its Hawthorn-scented blooms in profusion, while in the rock garden two of the Armerias, A. speciosa and A. bracteata rosea, are in flower, the latter particularly handsome at the present time. The quaint Astrantia maxima is also in bloom, and in shady spots Aubrietia violacea is still blossoming. The beautiful Calceolarias or Mariposa Lilies, planted last autumn, came through the winter with no protection, and commenced to bloom in the middle of the month. The varieties of C. venustus are of exceeding beauty, and it seems almost an impossibility for such small bulbs to produce flowers in such number and of such size. No flower-lover can look at these beautiful blossoms without admiration, and I shall certainly increase my stock next autumn. The blooms are so exquisitely pencilled with pink, purple, and maroon, so strikingly splashed with bold blotches of chestnut

and black, each set in a halo of sulphur or orange, with outward-curving petals of such transparent purity, that one can scarcely credit the fact that these are flowers of the open English air. June is the month when the Campanulas are at their best, C. glomerata being in bloom before its commencement, and C. carpatia being also common to May. The tall Campanula grandis and its white variety have been, as usual, very telling in the wild garden, where the still stronger-growing C. latifolia, both purple and white, throws up its spires of pendent blooms to a height of over 4 feet. Unfortunately, handsome as they are, neither of these Campanulas is particularly satisfactory for providing cut bloom, though, if cut and placed in water at once, they will last for a few hours; for travelling, however, they are absolutely useless. C. persicifolia alba, its larger variety major, and the double white form C. p. alba plena, last well when cut, especially the latter. The Canterbury Bells (C. Medium) have been very ornamental, and when the flowers are picked off as they fade, will perfect a second pyramid of bloom. Centaurea rubra was in flower early in the month, and before its close the great C. macrocephala lifted its golden brushes of bloom from the back of the border, while the blue Cornflower (Centaurea cyaneus) appeared but to be temporarily extinguished by the Jubilee celebrations, cornflower-blue being the exact tint required for the tricolour bouquets and button-holes. Cerastium tomentosum is too common to be allowed valuable space, but hanging, a glaucous white-starred sheet, from an old wall, it has a distinctly beautiful effect. The bright golden Coreopsis grandiflora is in full glory, many of the individual flowers being over 4 inches in breadth; these with their long stalks are excellent for indoor arrangements and are produced in profusion till late autumn. The tall Delphiniums have been very ornamental, especially those with Cambridge-blue flowers, this tint, a good deal lighter than that of Myosotis dissitiflora, being rare in the garden. Delphinium nudicaule seems a plant of rather weak constitution, but its scarlet flower-heads are pretty. The Burning Bush (Dictamnus Fraxinella) and its white variety have been in bloom, the type generally preceding the variation by some days. One of the brightest spots in the garden has been a bed of Dianthus Napoleon III., a glow of vivid crimson. Doronicum plantagineum excelsum Harpur-Crewe, though its regular season of bloom closed early in May, still produces a few great golden stars, while Erigeron speciosus (Stenactis speciosa), with its lavender-tinted yellow-centred blooms, is in the zenith of its beauty, which, however, is a lasting one, this plant having been in bloom for nearly six months during the previous year. The colour of the blossoms especially adapts them for association with white flowers, and many beautiful combinations are possible in this direction.

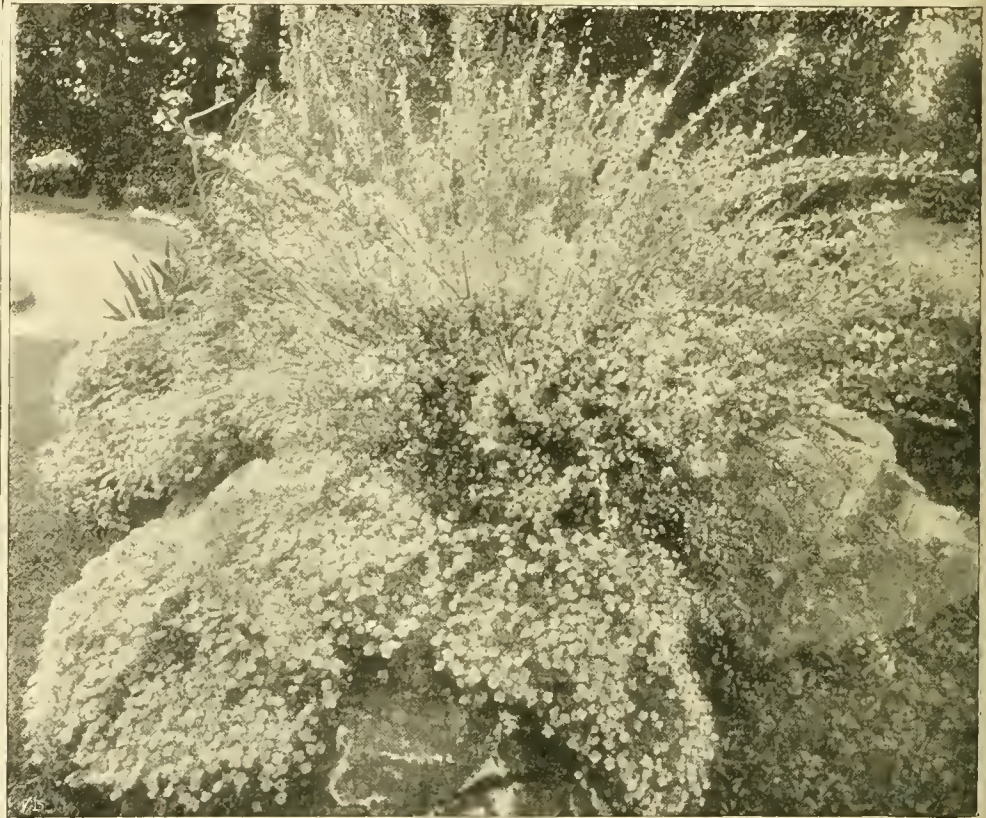
The Mexican Daisy (Erigeron mucronatus) has been in bloom for two months, and will doubtless continue to produce its simple flowers for another four or five. This plant is quite a weed in some gardens and seeds itself in the walls, from which little plants grown in the crevices between the bricks flower abundantly. The Caucasian Sea Holly (Eryngium Oliverianum) is at present one of the handsomest subjects in the garden, its great flower-heads having assumed the metallic, steely lustre that renders it so striking at the time of its flower ng. E. amethystinum is another handsome species, its iridescence being, as the name implies, more amethystine than blue. The white Foxgloves have reared their tall spires against the evergreens in the wild garden where the Funkias are coming into bloom, F. Sieboldi, with its large cordate leaves, being exceptionally handsome. About the middle of the month Galega officinalis commenced to flower, but its handsomer white variety was a full ten days later in opening its Pea-shaped blossoms. The latter is by far the more valuable of the two, and, associated with the scarlet Lychnis chalcidonica, creates a pleasing contrast. Early Gladioli have been very gay, but there is no doubt that these succeed better in

light soil than in heavy. Some very strong clumps which I lately saw growing in shaly ground had in two years increased in size and vigour wonderfully, while in the heavy soil of my own garden they diminish. Amongst the best are *G. Colvillei* The Bride, *ardens*, *insignis*, *delicatis-sim's* Blushing Bride, Prince Albert and Salmon Queen. Where they succeed and increase they should be grown in quantity, as they are very decorative in the garden and cannot be surpassed for cut bloom. *Gaillardia grandiflora* has been handsome with its rich crimson and yellow, while *Geum coccineum*, though less brilliant than in May, gives a bright note of colour, and *G. montanum* is studded alike with its yellow blooms and quaint fluffy seed-vessels. Against an Ivy-covered wall the delicate *Geranium striatum* is blooming, and *G. armenum* is also flowering freely. Of Day Lilies, *Hemerocallis flava* was in flower at the commencement of the month, its fragrant yellow blossoms being almost past before the first flower of *H. fulva* expanded. Planted by Madonna Lilies the tint of the latter shows to advantage. *H. Kwanso* fol. var. had not commenced to bloom at the month's end. The Sun Roses (*Helianthemum*) were beautiful in the rock garden during the intervals of sunshine, but a rather unwelcome reminder of autumn has shown itself in the form of a premature crop of bloom on *Helianthus multiflorus* Soleil d'Or. *Heuchera sanguinea* has produced its delicate coral-red bloom-sprays, which are in request for indoor decoration, in abundance. *Hypericum Moserianum* is in full flower, while the common St. John's Wort (*H. calycinum*) has clothed an almost perpendicular bank with its growth for many yards, and is now studded with its wide-spread golden blooms. *Inula glandulosa* has produced its large many-rayed flowers in profusion, but their season of beauty is not a lasting one. The coarse *I. Helenium* has also been blooming in a little-visited corner. It was sold to me some years since as *Telekia speciosa*, a plant which it somewhat resembles.

The Iris family began their display in May and ended it with the last day of June. *I. sibirica* by the streamside has been very fine, but some of the German Flags have bloomed poorly, notably the beautiful Princess of Wales, the best white, which did not open a single blossom. My two favourites—*I. pallida* (pale lavender) and *I. flavescens* (light sulphur)—however, did well, and the suave effect produced by their flowers interspersed with the apricot-tinted *Papaver pilosum*, which grows amongst the Iris clumps, would have been well worthy of the brush of that painter of beautiful colour schemes, the late Henry Moore. English and Spanish Irises have both been good, but both demand good drainage in heavy soils. The finest clump of the former that I know consisted four years ago of one or two bulbs; this year there were fifteen splendid flowers of a lovely soft, French-grey tint. The clump in question is situated at the extreme edge of a flat bed, where it is retained by about 3 feet of stonework. The soil is heavy, but the drainage is naturally ample, and the bulbs have never been touched since their first planting. In both English and Spanish Irises the self-coloured flowers are to be preferred to those splashed or flaked, and the best effect is produced by massing the colours separately. *I. Kämpferi* has flowered, but I have had the misfortune to lose a fine clump through the devastations of water rats. *I. orientalis* (syn., *ochroleuca*), *I. aurea* and *I. Monnieri*, all precisely similar in habit, have been fine, some having grown over 5 feet high and many having flowered. The variegated Water Flag has also been a striking object, but its variegation passes with its flowers, and its sword leaves are now purely green. I saw the other day at Kingswear, on the banks of the Dart, a colony of *Jaborosa integrifolia* growing with the greatest vigour. It had spread over a large portion of the sheltered bed where it was planted, and had even invaded the gravel path; in fact, it gave the appearance of being as rampant in growth as Horse Radish. It was bearing its white fragrant flowers in pro-

fusion. The soil in which it is growing is very light and on a steep slope. Of the Lilies, *L. pyrenaicum* was the first, being almost over by June 1. Then came *davuricum*, *Thunbergianum* and the beautiful little *L. elegans*, then *L. Martagon* and *Martagon album*, followed by *L. croceum*, *L. candidum* and *L. pardalinum*. *L. candidum* seems to be doing remarkably well this season, and, though we have had heavy rains, has shown no trace of the disease, of which I have as yet seen no signs in this neighbourhood. *L. pardalinum* is especially fine, several stems being nearly 6 feet in height and bearing from thirty to fifty flowers and buds. This Lily seems to have a much stronger constitution than the other so-called swamp Lilies, *L. superbum* and *L. canadense*, which grow in the same bed, but never show a like vigour. *Lavatera trimestris* (white, pink and crimson) is already in bloom, and *Linum flavum* is a patch of light gold on the edge of the rock garden, while *Linum narbonense* is also flowering. *Libertia grandiflora* is well worth

year, however, at Kingswear I was charmed to see plants from some of my cuttings a blaze of scarlet, and I hear from the Isles of Scilly, where I also sent it, that it is a wonderful sight at the present time. It has been sent from there to Kew, and has, I am told, been assigned the name of *M. amenum*. I saw it a few weeks since in full bloom on a balcony in the Spanish frontier town of Tuy. By the water the *Mimulus* is a wealth of gold and chestnut, where, in the shade, *Myosotis palustris* and *M. dissitiflora* spread their different shades of azure, and the white flowers of *Saxifraga Wallacei* droop from the overhanging stones. On the Bergamot the large crimson flower-heads are fully expanded, contrasting well with the golden yellow of *Oenothera fruticosa*. *O. Youngi* and the charming *O. marginata* are also in flower, and the giant Evening Primrose (*O. Lamarckiana*) is also coming into bloom. In the early days of June the Arabian Star of Bethlehem (*Ornithogalum arabicum*) was in fine flower, and *Onosma tauricum* is now thickly set with yellow



*Genista præcox* on a carpet of *Aubrietia Leichtlini* at Abbotsbury. From a photograph sent by Messrs. R. Veitch and Son, Exeter. (See p. 38.)

growing, as it blooms with exceeding freedom, increases rapidly, and is also not to be despised for cutting. The Lupines, white and blue, were handsome while they lasted, and the yellow tree Lupine has just commenced to flower. The scarlet blooms of *Lychmis chalcidonica* strike a high note of colour in the garden, and *L. viscaria splendens* fl. pl. is little behind it in brightness. *L. vespertina alba plena* has also been in bloom, but its flowers are not so effective as those of the two first-named. The white Musk Mallow (*Malva moschata alba*) is in flower, and in some gardens the *Mesembryanthemum* are a sight of marvellous brilliance. The soil of my garden is too damp and heavy for them, and I have had to give up their culture. About ten years ago I brought from the Cape a plant of an exceedingly bright vermilion *Mesembryanthemum* which I was never able to flower. This

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Coulteri expanded its first delicate blossom, but established plants will probably not commence their blooming season for a few weeks, as they are at present growing strongly. The double white Rockets with the moister weather experienced this June have been more fragrant than during the past three years. These, like the Madonna Lilies, seem to thrive best in cottage gardens. Fair Maids of France (*Ranunculus acutifolius* fl.-pl.) and *R. acris* fl.-pl. have both been blossoming, while the Roses have been looking better than for years past, the plants being particularly clean and healthy and the flowers symmetrical. The Austrian Brier hedge with its bright gold and copper was a brilliant spectacle when at its best, and Paul's Carmine Pillar Rose has been much admired, as was Lady Penzance of the hybrid Sweet Briers. A very beautiful new Rose, something after the manner of Ideal, is Irene Watts, an indescribable mixture of subdued tints ranging from a suspicion of scarlet, through orange and apricot to shell-pink and faintest saffron. The Sweet Peas have come out in force this year, but the differences between some of the varieties are so slight as to be imperceptible. Perhaps the best combination for arrangement in bowls is Countess of Radnor, lavender, Venus, very pale blush, and Primrose or Mrs. Eckford, both white, with a trace of yellow. *Scabiosa caucasica* has opened its first light blue flowers, and *Sedum album* and the pink-flowered *Semprevivum arvense* are, as usual at midsummer, murmurous with the honey-bees. The delicate little *Silene alpestris* is starred with its tiny white blossoms, while *S. maritima* fl.-pl. has studded its glaucous leaves with close-set blossoms. Many of the Spiræas have been in bloom through the month. Of the herbaecous section, *S. Aruncus*, *S. filipendula*, *S. japonica*, *S. palmata* and *S. venusta*, while of the shrubby Spiræas, *S. flagelliformis* has commenced to flower. *Thalictrum aquilegifolium* and *T. adiantifolium* have both been in bloom, though that of the latter Meadow Rue is of no decorative value, its sole beauty consisting in the Maiden-hair-like foliage. The handsome purple-flowered *Tradescantia virginica* has almost gone out of cultivation, but may occasionally be seen in cottage gardens, in some of which it is now blooming in company with the old-fashioned Jacob's Ladder (*Polemonium coeruleum*) and its white variety, Sweet Williams and Pansies. *Verbascum phoeniceum*, both purple and white, are now in flower, as is the blue *Veronica spicata*. Violas are also very charming, Border Witch and Countess of Kintore being especially pleasing. Of climbers, *Clematis Miss Bateman* has been remarkably fine on a Laurel archway, while *C. Jackmani* has spread its purple veil over bank, porch and ivied wall, and the fragrant Jasmine has starred a pergola with its white flower-clusters. *J. revolutum* is also in bloom. *Solanum jasminoides*, unharmed by the winter, has commenced to flower close under the eaves; by the end of the autumn the house will be clad in bridal attire with its blossoming. *Tropeolum speciosum*, in a spot where its roots are shaded, has painted a space of wall with its vivid vermilion, and at last seems thoroughly at home.

*Benthamia fragifera*, which suffered so much in the severe weather three winters ago, is covered with bloom, and no longer shows any effects of the visitation. The *Deutzias* are in wonderful flower, even better than in 1895, simply masses of white. *Dracenas* have been in bloom in many cases, one specimen not 6 feet high bearing a huge flower-spike 3 feet through, about which all the bees in the valley seemed to congregate. Other shrubs in bloom have been the *Syringas*, *Ceanothus azureus*, *Cistus ladaniferus*, *Fabiana imbricata*, *Kalmia*, *Ozothamnus thyrsoides*, *Veronicas* and *Weigelas*. The first flower was cut from the standard *Magnolia grandiflora* on June 22, exactly one week later than in 1896.

S. W. F.

**Calochortus Plummeræ aureus.**—Among Calochorti this is perhaps the most vigorous, as it

is also the most remarkable for its handsome flowers. At the last meeting of the Royal Horticultural Society Messrs. Wallace had a fine exhibit of this kind for which an award of merit was obtained. When under the best conditions the plant will attain to nearly 3 feet high, producing its giant blossoms over a long season. This variety has blossoms each nearly 4 inches across and of a clear golden yellow, with a faint ring of reddish-mahogany in the upper part of the flower, while inside it is densely bearded.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

JULY 13.

As regards extent, there was a perceptible falling off at this meeting, yet there was quite sufficient to well repay a visit. The predominating feature was the hardy border and other flowers, which were fully represented from various sources. Hardy Lilies, Calochorti, &c., came from Colchester, these, as at previous meetings, being of remarkably good quality. Carnations from Chelsea showed what can be done within the London radius with this popular border flower. Sweet Peas in most lovely tints and of good quality came from Wem, with hardy flowers from Tottenham, Tunbridge Wells, Southampton, and elsewhere. All made a most brilliant display, whilst of garden Roses there was a fine show from Colechester, which district might fairly be termed the "home of the Rose." Of pot plants, the best exhibits by far were the beautifully grown lot of Aspleniums from the Dyson's Lane Nurseries, which had the stamp of hardiness upon them, and a good display of tuberous Begonias from Yeovil. Note should also be made of the exhibit of the new hybrid Water Lilies from the extensive collection at Gunnersbury House, the individual flowers being of good quality.

Orchids were singularly few, a few choice hybrids being the almost only exhibit. Fruit was grandly represented by the superb collection of pot-grown Cherries from Sawbridgeworth, the varieties being of the finest quality and the fruits of immense size. Of Gooseberries there was a fine selection in pots from Langley. The premier exhibit, however, remains to be noted, viz., the grand collection of vegetables shown from the gardens at Aldenham House, Elstree, whence Mr. Beckett had brought as representative a collection as could be possibly desired, and that of fine table quality without any undue coarseness.

### Orchid Committee.

Awards of merit were given to—

**LALIO-CATTLEYA CANHAMIANA VAR. ALBIDA** (*L. purpurata* crossed with *Cattleya Mossie*).—A lovely form with white sepals and petals. The petals have a slight tinge of rose. The lip is crimson-purple margined with white, the side lobes rich crimson-purple, shading to yellow, and lined with brown at the base.

**PHAIUS ASHWORTHIANUS** (*P. Manni* × *P. maculatus*).—This is a lovely form, the sepals and petals rich yellow, the lip deep brown, lined with bright yellow. The upper lobes of the lip are rich yellow on the outside, lined on the inside similarly to the front lobe. It is one of the most distinct we have seen. The flower-scape was about 3 feet long, and carried ten flowers and buds. From Messrs. F. Sander and Co.

**EPIDENDRUM NEMORALE.**—A well-known species which had never been previously certificated. The sepals and petals, each about 2½ inches in length, are of a delicate rose colour, the large front lobe of the lip nearly white, tinted with rose towards the centre, where it has numerous purple veinings. The side lobes are deep rose, lined with purple at the base. A finely developed cut spike was exhibited. From Frau Ida Brandt, Zurich, Switzerland.

Messrs. J. Veitch and Sons, Ltd., sent a small collection of choice hybrids. In addition to the

plants certificated, there were two slightly different forms of *Lalio-Cattleya Canhamiana albida*, a grand plant with three flowers of *L. C. Zephyra* (*C. Mendeli* × *L. xanthina*), the sepals rich golden yellow, the petals lighter than the sepals; the lip has a purple blotch in front, margined with white, the side lobes creamy white, shading to yellow, and lined with purple through the base. This hybrid certainly improves on acquaintance. *L. C. Eunoma* (*L. pumila* × *C. Gaskelliana*) is one of the finest of the *L. pumila* crosses. The sepals, about 3 inches in length, are deep rose in colour; the petals, longer than the sepals, 2½ inches in breadth, are similar in colour to the sepals; the lip rich crimson-purple in front, shading to a deep orange-yellow in the throat. Two plants of *Disa Veitchi* were also included. Messrs. F. Sander and Co. sent *Cypripedium orphanum*, *C. Euryale*, *C. Svend Bruun*, and *C. Malus*, which closely resembled *C. T. W. Bond*. It is said to be a hybrid between *C. lirsutissimum* and *C. Lawrenceanum*. Mr. E. Ashworth, Harefield Hall, Cheshire, sent good forms of *C. Warszewiczii* (*C. gigas*), the white *C. Eldorado Wallisi*, and a grand form of *C. Mossie*, lip very similar to that of *C. M. Richard Curnow*. Two flowers of *C. superba alba*, the sepals and petals white, slightly tinted with rose, the lip white, with a few lines of purple in the centre in front of the small yellow disc, and *Lalio-Cattleya Mendeli*, now rarely met with, were also sent. A cut flower of the new *Dendrobium Victoria Regia*, recently imported, was also shown. In this the sepals and petals are blue at the top, veined with a darker shade, the base being wholly greenish white, the lip violet in front, where it has numerous purple lines; the column ivory white. It is very distinct in colour, but is scarcely worthy of the high opinion given it. Frau Ida Brandt sent a spotted form of *Odontoglossum* in the way of *O. Willekeanum*, a grand spike of *Phaius Humbloti*, and cut spikes of *Epidendrum cochleatum*, *E. atropurpureum*, *E. Brassavola*, and *Phalanopsis violacea*.

### Floral Committee.

First-class certificates were on this occasion voted to the following:—

**NYMPHEA MARILICEA ALBIDA**, which is beyond any question the finest white Water Lily in cultivation, fully-developed flowers being quite 2 inches in diameter, the white being purer than in the well-known *N. alba*. The vigour of this newer form is also remarkable in the immense size of the leaves, whilst each flower is supported upon remarkably stout footstalks. Being quite hardy and a free-flowering plant, this variety should be noted by growers. From the collection of Mr. Leopold de Rothschild, Gunnersbury House, Acton (gardener, Mr. J. Hudson).

**PLATANUS OCCIDENTALIS ARGENTEO-VARIEGATA.**—A thoroughly well-marked form of this Plane, the younger leaves almost entirely of a creamy white shade, the older ones possessing more green in them. This is a very showy variegated plant, and its future career will be watched with interest. From Mr. John Russell, The Nurseries, Richmond, Surrey.

Awards of merit were voted to—

**ROSE (TEA-SCENTED) SYLPHI**, a decided acquisition, being so very distinct in colour, a soft, pale creamy blush pervading the flowers, with deeper blush tints in the bud stage; a lovely Rose and of fine form. From Messrs. W. Paul and Son, Waltham Cross.

**LOBELIA TENUIOR GRANDIFLORA.**—A very distinct *Lobelia* of slender yet erect growth which branches at the base; each flower is fully 1 inch across, the colour a bright blue with a variation in one instance to nearly white. From Mr. B. Ladham, Shirley Nurseries, Southampton.

**CALOCHORTUS PLUMMERÆ AUREUS.**—A remarkably fine form with large flowers, the petals of which are of extra breadth, whilst the colour is a deep golden yellow, the hairs at the base being very profuse. A distinct acquisition to the race. From Messrs. Wallace and Co., Colchester.

**SALVIA BICOLOR.**—A North African species from Morocco, and at the same time hardy in this country. The growth is exceedingly vigorous, the flowering shoots being branching and clothed with flowers from base to top, the colours being pale lavender, blue and white. From Sir Trevor Lawrence, Burford Lodge, Dorking (gardener, Mr. Bain).

**NYMPHÆA ELLISIANA.**—One of the more recent hybrids raised by M. Latour-Marliac and a decidedly distinct novelty. The growth is moderate with leaves of medium size, the colour a brilliant carmine suffused with purple. M. Latour-Marliac considers this Lily to be one of the best in cultivation. When well established it will no doubt be finer. Mr. J. Hudson.

**BEGONIA MISS GRIFFITHS.**—A large double-flowered tuberous variety, very full, the petals distinctly undulated at the margins, the colour a pale blush-white. Mr. Davis, Yeovil.

A botanical certificate was given to

**ARISTOLOCHIA BRAZILIENSIS.**—A variety with flowers above the average size, the venations and groundwork of the colouring being much darker than usual. Mr. H. Wallace, Amoy, China.

Messrs. R. Wallace and Co., Colchester, again staged an extensive group of Lilliums and Calochorti, the former including a beautiful batch of *L. umbellatum* Cloth of Gold, *L. Henryi*, *L. Krameri*, one of the most attractive of the pink-coloured Lillies, and *L. speciosum album novum*. The Calochorti were as usual of fine form and well grown, the Eldorado forms especially showing remarkable variations in colour (silver Flora medal). Messrs. Veitch and Sons, Chelsea, also had a large and fine collection of hardy flowers, arranged with admirable judgment. Among the notable things were *Achillea Eupatorium*, *Campanula carpatia alba*, *Helenium pumilum*, particularly fine in colour and size; *Acanthus latifolius*, *Cimicifuga racemosa*, *Prunella Webbiana*, and *Linum flavum*. There were also a collection of very fine *Iris Kampferi* seedlings and a group of Carnations, including many beautiful and delicate varieties. A few of the most striking were George Cruikshank, a richly-coloured flower, salmon and scarlet, and very full; Sweet Brier, a lovely cardinal, of good form and substance; Eldorado, a charming yellow and pink fancy; Golden Eagle, Voltaire, and Cardinal Wolsey (silver-gilt Banksian). Another good group of hardy flowers came from Mr. B. Ladhams, The Shirley Nurseries, Southampton, and included *Verbascum phoeniceum*, *Physostegia virginiana alba*, *Eriogonum missouriensis*, a number of varieties of *Campanula*, a beautiful form of *Scabiosa caucasica*, and some good varieties of *Echinops* and *Eryngium* (silver Flora medal). Hardy flowers were again well shown by Messrs. Barr and Sons, Covent Garden, the group being admirably arranged and full of interest. Sweet Peas were particularly good, also *Chrysanthemum maximum*, a number of well-grown Pentstemons, varieties of *Iris Kampferi*, and *Coreopsis grandiflora* (silver Banksian medal). A small group of hardy flowers was shown by Messrs. Young and Co., Stevenage, Herts, and in it were *Aconitum Napellus* and some good *Gaillardias* and Sweet Williams.

A particularly delightful exhibit was a collection of Sweet Peas, shown by Mr. Henry Eckford, Wem, Shropshire. Every variety was finely grown, the size, form and colour of the blooms being excellent. Among the finest varieties were *Blanche Burpee*, unrivalled among the pure whites; *Lovely*, very delicate pink, large blooms; *Mrs. Eckford*, very handsome primrose-yellow self; *Shahzada*, very dark maroon, the wing petals purple; *Lottie Eckford*, pure white, suffused with lilac; *Duchess of York*, *Venus*, *Mars*, the largest and finest bright red; *Mrs. Gladstone*, *Dorothy Tennant*, a fine deep mauve; *Stanley*, very deep maroon, with shades of purple; and *Salopian*, a rich dark red (silver Flora medal). Mr. J. Charlton, Tunbridge Wells, also exhibited hardy flowers, among them being a good bunch of *Agrostemma coronaria*, *Salvia argentea*, a good collection of *Alstroemerias*, *Platyodon Mariesi* and

*Scolymus grandiflorus* (silver Banksian medal). Another group of hardy flowers came from Mr. T. S. Ware, Tottenham, *Veronicas* and *Alstroemerias* being good (silver Banksian medal). Cut *Begonias* were well shown by Mr. B. R. Davis, Yeovil. All were in admirable condition, with full and well formed petals, the colours throughout very beautiful (silver Banksian medal). Another interesting exhibit was a group of seedling *Begonias* from seed sown five months ago, sent by Messrs. Cannell and Sons, Swanley. They were an admirable batch of plants, dwarf and strong in growth. A strain of rich crimson flowers was particularly fine (bronze Banksian medal). Mr. James Douglas, Great Bookham, Surrey, had a collection of cut Carnations, very good material, containing a number of new varieties, among which were *Lancer*, a shapely crimson and yellow fancy; *Bedminster*, similar in colour, but larger; *Ibis*, a pale blush self; *Mrs. James Douglas*, a handsome bright red self, and *Endymion*, a very lovely pink self of splendid form. A good group of *Roses* came from Messrs. William Paul and Son, Waltham Cross. Some of the best were *Empress Alexandra of Russia*, a new Tea Rose of excellent quality, with a good hard centre. The colour is charming, being a beautifully shaded rose, tinged with apricot. The foliage is good. It appears to be a very free bloomer, and should prove a great acquisition. Other good things were *White Lady*; *Sylph*, a new Tea of very lovely form, pale pink in colour; *Enchantress*, and *Waltham Standard*, a new H.P. Messrs. Frank Cant and Co., Colchester, also exhibited cut *Roses*, the best in their group being a dozen superb blooms of *A. K. Williams*. The *Bride*, *Mme. de Watteville*, *Mme. Cusin*, *Innocente Pirola*, *Cath. Mermie*, and *Mme. Lambard* were also good (silver Flora medal). From Messrs. F. Sander and Co. came a group of *Watsonia iridifolia* O'Brien, handsome plants, bearing fine spikes of pure white blooms. A grand group of *Aspleniums* was staged by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, and included *Asplenium nidus phyllitidis*, *A. Mayi*, *A. contiguum*, *A. cucumatum*, *A. Herbsti*, *A. nobile*, *A. erectum*, *A. cultriforme*, and *A. lucidum* (silver-gilt Flora medal).

For twelve bunches of hardy flowers, Mr. C. Herrin, Dropmore, Maidenhead, was awarded first prize, showing fine bunches of *Helianthus multiflorus*, a seedling *Delphinium*, *Achillea* The Pearl, *Yucca gloriosa*, *Aconitum bicolor*, *Rose Crimson Rambler*, *Spirea arifolia*, *Galega officinalis*, *Lilium candidum*, *Lysimachia thyrsoiflora*, *Lathyrus grandiflorus*, and *Alstroemeria aurantiaca*. Foreign bunches of hardy flowers, Miss Debenham, St. Albans, was first, her best bunches being *Erigeron speciosus superbus*, *Alstroemeria aurantiaca*, *Eryngium Oliverianum*, *Lilium candidum*, and *Hedysarum obscurum*.

#### Fruit Committee.

The exhibits before this committee took up quite half the hall. The vegetables from Aldenham were superb, and Messrs. Veitch's and Messrs. Rivers' fruit very fine.

Awards of merit were given to—

**MELON SYON PERFECTION.**—This is a seedling from Syon House and Beauty of Syon. It is a medium-sized fruit, nicely netted, with a greenish rind, but bright scarlet flesh of rich flavour, and great depth. It is one of the best flavoured Melons of the year. From Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford.

**THE LOGAN BERRY, or Strawberry Raspberry.**—An American fruit, with foliage not unlike our Raspberries, but of dwarf and bushy growth. The fruits, long and freely produced, are of a dull red colour and a brisk acid flavour. It is a decided acquisition for cooking or preserves, and is stated to crop freely. From Messrs. Bunyard and Co., Maidstone.

Messrs. Veitch, Ltd., Royal Exotic Nursery, Chelsea, staged a very fine lot of Gooseberries which had been grown in pots at their Langley nurseries. This was a remarkable exhibit, as Gooseberries grown thus are so subject to red spider. The trees were perfect specimens of

culture and laden with fruit. Forty varieties were staged. The best varieties were *Industry*, *Red Champagne*, *Whitesmith*, *Coiner*, *Highlander*, *Forester*, *Wellington*, *Leader*, *Golden Drop*, *Railway*, and *High Sheriff*. A very large tray of the new Strawberry Veitch's Perfection was also staged. The committee thought it excellent, and confirmed the award given last year (silver-gilt Knightian medal). Messrs. Rivers and Son, Sawbridgeworth, Herts, sent twenty varieties of Cherries, remarkable for their size and colour. The fruits of *Monstreuse de Mezel* were of enormous size, also those of *Bigarreau de Schreken* and *Noir de Guben*. Rivers' Early Black was equally fine, and was noticeable for its small stone with so much flesh. Several others of the *Bigarreau* type were very fine (silver-gilt Knightian medal). Mr. Allan, Gunton Park Gardens, Norwich, staged a new Strawberry, *Lady Suffield*, a dark red fruit, firm and good. This the committee thought too much like *Lord Suffield*.

The finest exhibit was the superb lot of vegetables from Aldenham, thirty-two varieties being set up in large quantities, the produce just the kind for table. Cauliflowers were very fine, and were represented by *Webb's Mammoth*, *Veitch's Autumn Giant*, and *Walcheren*. Onions were equally good, the varieties being *Red Italian* and *White Leviathan*. There were excellent Cucumbers *Beckett's Victory*, with very fine *Sutton's Perfection* and *Polegate Tomatoes*. Peas were shown in three varieties, the best being *Early Morn* and *Ne Plus Ultra*, *Duke of Albany* the other. *Sutton's Snowball Turnip* and *Globe Beetroot*, with perfect *Vegetable Marrows*, *Pen-y-hyd* and *Moore's Cream* were also shown. Carrots were perfect, the varieties being *Sutton's Gem* and *James' Intermediate*. Potatoes, in two varieties, included first-rate *Rivers' Ashleaf* with *Sharpe's Victor*, and a nice compact Cabbage, *Carter's Model*, with *Broad Beans* in variety (gold medal). From Mr. Beckett, Aldenham House, Elstree, Herts.

Messrs. Carter, High Holborn, sent a very fine collection of Lettuce and a few Turnips, the quality good for so dry a season. The most noticeable were *New York*, *Carter's Longstander*, *Sugarloaf*, *Continuity*, an excellent Cabbage variety with purple leaves, *Ne Plus Ultra*, *Victoria*, and *Buttercup*. Among the ten varieties of Turnips, *Purple Top Strapleaf* was very good (silver Banksian medal). Messrs. W. W. Johnson and Son, Boston, Lincolnshire, staged forty varieties of Peas, mostly excellent samples. *Boston Unrivalled* was very fine, and such kinds as *Windsor Castle*, *Gradus*, *Duke of York*, *The Queen*, *Peerless*, *Stratagem*, *Sutton's Seedling*, *Marrowfat*, *Ambassador*, and *Alderman* were also good (silver Banksian medal). Mr. Eckford, Wem, Salop, sent half a dozen varieties of Peas of great merit. These the committee desired to be sent to Chiswick for trial to test cropping. Messrs. R. Veitch and Son, Exeter, sent Peas *Veitch's Perfection* and *Goldfinder*, and their *Broad Bean Exhibition Longpod*.

The awards given at Chiswick on the 1st inst. were now confirmed, awards of merit being given to—

**STRAWBERRY WONDERFUL.**—A variety having long scarlet fruits produced in great profusion. Flesh firm and of excellent flavour. From Messrs. Bunyard and Co., Maidstone.

**BROAD BEAN CHAMPION.**—A very large pod, long and handsome. It is a very free cropper. From Messrs. Dobbie and Co., Rothesay, N.B.

The award to the other Broad Bean (*Exhibition Longpod*), given three marks, was not confirmed. Messrs. R. Veitch and Son, Exeter, sent up a nice dish, but it was decided to grow this variety again at Chiswick with others for comparison. This also applies to *Harrison's Robin Hood*.

#### MEETING AT CHISWICK.

This committee met at the society's gardens and inspected the Peas, several of which were not ready at the last meeting.

Awards of merit were given to—

**PEA VEITCH'S PERFECTION.**—An old and well-known variety of sterling merit. This variety originated at Exeter many years ago, and was now grown from seed sent by Messrs. R. Veitch and Son, Exeter.

**PEA MAJESTIC.**—A very fine marrow variety, producing in each pod seven to nine Peas of large size, excellent quality and a good green colour. It is not unlike *Ne Plus Ultra*, and grows 3 feet high. From Messrs. Watkins and Simpson, Strand, W.C.

**PEA CAPTAIN CUTLER.**—A very fine Pea, with large pod and of branching habit, after the *Autocrat* type. It grows 4 feet high and is of first-class quality. From Messrs. Hurst and Son, Houndsditch, E.C.

Pea Goldfinder was thought to be an excellent variety, and will doubtless be seen again at an earlier stage of its growth. Mr. Hudson, Gunnersbury House, Acton, sent Strawberry Louis Gauthier, a French variety with a white berry, a heavy cropper, and useful on account of its bearing a second crop in the autumn. The fruits sent were over-ripe, and the committee requested that it be sent again, when fruiting in the autumn.

On this occasion all the committees met and sat down to an excellent luncheon, the president (Sir Trevor Lawrence, Bt.) in the chair. The chairman said the council were greatly indebted to the committee for the time they gave the society and the interest they took in its affairs, and introduced Dr. Masters, who opened a discussion on how to better utilise Chiswick Gardens. He stated that, as regarded past results, no horticultural society could compare with the Royal Horticultural, but his remarks more concerned the future and how to keep up the society. In these days Kew did what the society formerly did, and nurserymen were ever on the alert to get good things. What they had to consider was how to make the gardens more useful. He thought they should make the gardens more educational. He would leave the practical part of the subject to those who understood it, and he would suggest they should have a model garden, and have types of vegetables, fruits and flowers, or type collections, not mere varieties. They would do well to have lectures on pruning and other subjects, trials of manures and the best means to cope with disease. As regards the educational part, he would like to see the students drafted to Kew in the evenings to hear the lectures there, and the Kew students could with advantage come to Chiswick and get a knowledge of fruit culture. In America there was a much better educational system, and the State supplied the means. He knew it was useless to apply to the State in this case, but the county councils had means and could supply them. In America there was a better knowledge of disease, and spraying of trees was well understood. Dr. Masters read extracts from eminent botanists in America, who thought the society could well undertake the above work. He advised more study, and to use the gardens for that purpose.

Sir Joseph Hooker complimented Dr. Masters on his able speech, and alluded to the good work done at Chiswick in the past. He agreed with what had been said as to the value of education. There were great difficulties in the way of State aid. He recounted the troubles they experienced at Kew. He would have been pleased to help them in the project of utilising Kew had it been in his power, and he sympathised with them in the good work suggested. Mr. Harry Veitch expected they would find difficulties in doing all at Chiswick as suggested. They must remember the place was now more confined and the results could not be so satisfactory as further afield with better soil and purer air, and Chiswick would yearly be less valuable as an experimental centre. He would gladly assist in any way possible. Dr. Plowright spoke as to the American system; he would like to see it given a trial at Chiswick. M. H. Vilmorin wrote from Paris regretting his being unable to attend. He placed high value on the

good work done at Chiswick in the past. He valued the trials, and he strongly advised continuing the same. Mr. M. Dunn wrote from Dalkeith Gardens, and noted the value of Chiswick Gardens as trial grounds. He would like to see this work extended and the commercial part of the gardens done away with, thus giving more time and scope to the testing and growth of all new things. The chairman, in proposing a hearty vote of thanks to Dr. Masters for his able address, alluded to these two valuable opinions from practical men, far apart and with a good knowledge of the subject, and trusted the discussion might lead to useful results.

## NOTES OF THE WEEK.

**Gaillardias** are among the gayest flowers of the week. A seasonable reminder is that a few seeds, if sown at once, will make nice plants for putting out in October in permanent places, and as such make the best flowering plants a year hence, no time should be lost in securing seed.

**Carnation Jim Smyth** is, perhaps, one of the very finest of border Carnations so far as size of flowers and the clear rich scarlet colour are concerned. The variety possesses a certain amount of freedom also, judging by a handful of blossoms and buds at the Drill Hall this week.

**Sidalcea malviflora Listeri.**—Some pretty spikes of this charming kind were exhibited at the Drill Hall on Tuesday last. It is a pale pink variety, and if free flowering would make a most welcome feature in the garden. The blossoms are each nearly  $\frac{1}{2}$  inches across, prettily fringed at the edge.

**Lilium japonicum Kramerii.**—Some very deeply coloured blossoms, as shown by Messrs. Barr at the Drill Hall this week, showed the variety of colour even in this plant in its wild state. The blossoms were also shorter in the trumpet, and could it be but well grown generally it would make a lovely plant for our gardens.

**Clematis Jackmani** is now particularly fine in many districts. It is one of many plants raised during the present century that has found favour with the large majority of those possessing a garden. The free-growing character of the plant and the rich profusion of flowers help to make it the most useful of a valuable race of plants.

**Late Apple blossom.**—An Apple tree here, on which the fruit is about the size of a small hen's egg, is now displaying a few clusters of bloom, one of which I enclose. The bloom of this and another tree in May last was very seriously damaged by frost, and that of some other trees here was entirely destroyed at the same time.—W. M., *Wexford*.

**Campanula G. F. Wilson.**—This very showy plant is now blooming freely, and in some instances quite attractive from the large masses of its flowers. As a rock plant it is very desirable, succeeding best, however, where a good depth of soil exists. It is a hybrid or more than ordinary value, and more of such good and distinct plants would be welcome in our gardens in the height of summer.

**Indigofera floribunda.**—A large example of this about 10 feet across is now flowering freely in the nurseries of Messrs. Veitch at Chelsea. The flowering has only just begun, so to speak, since the plant during many weeks in succession produces its lilac-purple blossoms, and loosely trained to a wall is pleasing also in its habit of growth. The example in question has occupied its present position for years and is still fresh and vigorous.

**Carnation Nell Gwynne.**—This handsome variety is the first pure white kind belonging to the Malmaison type of Carnations, and in its foliage, even more so than in the large, handsome snow-white blossoms, it is unmistakably of this set. In the bud and form of calyx, however, there is evidence of another type, which recalls the large flowers of *Ellen Terry*, perhaps the

largest white of the border section. The above will no doubt be speedily followed by others of equal merit.

**Scolymus grandiflorus** is one of the large growing Thistle-like composites that is worth more attention in gardens. Not that the plant is worth the best positions, yet it has a decorative value of its own when seen in groups of a dozen in the higher parts of the rock garden. Such a position would be in keeping with the rugged or picturesque character of the plant generally, and when crowned with its deep golden flower heads it is very effective.

**Rose Empress Alexandra of Russia.**—This lovely new Rose was exhibited by Messrs. Wm. Paul and Son at the Drill Hall this week, and possesses the merit of an entirely new shade of colour, while the blossoms are full and of good form. The predominant shade is a salmony bronze, with a shading on the tips of the petals of cherry-rose—a really charming combination. A large basket of its flowers and buds displayed it to considerable advantage.

**Brodiaea grandiflora.**—For the rock garden or the border this is perhaps not only the showiest, but also the brightest of its race. Indeed, the clear rich blue of its flowers is very remarkable, if not unique, especially so when planted freely, so that a good idea may be formed of its value. In loamy soil it is of easy culture, and worth growing freely from the fact that blue flowers of this class are not abundant at midsummer. Such plants cannot be too widely known.

**Single Hollyhocks** in almost every shade of colour and in some cases 9 feet and 10 feet high now produce a distinct effect in the garden. The rose, pink, and white flowers are especially pleasing from a colour point of view, and not less so by the light and airy character as compared with the double forms. Of no small value is the fact that the majority of single kinds, while growing much more freely generally, enjoy almost perfect immunity from disease.

**Iris Kämpferi.**—The large collection of flowers that the Messrs. Veitch brought to the Drill Hall on Tuesday last would appear to do away with the need for obtaining named varieties of these plants. The group, which was labelled "seedlings," showed not only very large and good flowers, but considerable variety also, sufficient for almost any purpose. Indeed, it is surprising what beautiful forms could have been selected from the large array of blossoms shown.

**Pelargonium Beauty of Castle Hill.**—This Ivy-leaved *Pelargonium* is the most free-flowering of all the double varieties of this useful group, and, together with its compact habit and vigorous growth, may safely be regarded as one of the very finest ever raised. The brighter coloured variety *Souvenir de Chas. Turner* and the above constitute a pair very difficult to equal. Both kinds were raised by the late Mr. Robert Owen, of Maidenhead, and are still in the first rank of these plants.

**Crassula coccinea.**—It is only occasionally that the brilliant colour of the flowers of this plant is brought to such perfection as was the case with a group of large plants noted at Chelsea the other day. The exceeding brilliancy of the heads of blossom was conspicuous at a considerable distance. Frequently when grown under glass much of the intense scarlet hue is wanting. The plants were placed in the open in full sun, and this plan is worthy of imitation by anyone who experiences difficulty in obtaining finely coloured heads of bloom.

**Nymphæa Marliacea albida.**—The noble blossoms of this came before the Royal Horticultural Society on Tuesday last and a first-class certificate, which they justly deserved, was at once awarded. A group of this noble form when fully established will create quite a new feature in the water gardens of this country. Mr. Hudson, with commendable forethought, exhibited all the blossoms in a shallow tray of water, and accompanied by their foliage in each instance they

formed a pleasing as well as instructive exhibit. The flowers came from Messrs. de Rothschild, Gunnersbury House.

**Lychnis vespertina plena** is an old-fashioned border flower that produces for several weeks in succession almost endless quantities of pure white double flowers. As a border subject it is among the best, but it is not specially suited for cutting, owing to the peculiar nature of the stems, that do not take water so readily as many things. In some soils the plant frequently sheds many of its flower buds, a circumstance in all probability due to the absence or presence of certain food supplies. In gardens where the soil is deep and rich, and where also a certain amount of chalk is contained in the soil, the plant will attain to great size and flower in proportion.

**Echinops ruthenica**.—The globular heads of purple-blue that crown this plant at the present time provide it with a touch of picturesque beauty that is often admired in the garden or woodland. The plant is in this way just removed from the ordinary flowering subjects which are of daily occurrence; yet at the same time such things have their decorative side if only they are seen in groups of sufficient size to render them effective. Planted in deep and fairly good soil, it should be allowed to remain a year or two to become well established. Seed, division and root cuttings are the means employed to increase this, as also the allied forms.

**Campanula Balchiniana**.—A very fine batch of this distinct hybrid may be seen in Messrs. Veitch's nursery at Chelsea. The plant is variously employed, mainly, however, suspended in baskets and in small pots. It is also on trial in the open air, though as yet it is not so effective in this way; but as a margin near the grass, provided the brightness of the variegation is maintained, it should prove very effective. Under glass the variegation is exceedingly bright and effective, and the flowers, a rather dark blue, show to advantage. In size and shape the blossoms are a counterpart of those of *C. fragilis*, which is one of its parents, while the colour is somewhat darker.

**Watsonia iridifolia O'Brieni**.—A grand exhibit of this plant under the name of *Ardernei*, from Messrs. Sander, was among the finest things in the Drill Hall this week. The plants, which were arranged on the floor, were about 6 feet high, bold and vigorous, as well as abundantly flowered. The effect of the group was very fine, as may be gathered from the fact that the flowering spikes were nearly 3 feet in length and in prime condition. All the plants were grown in quite small pots. It would be difficult to name a finer subject for the cool conservatory, where it may be planted in bold groups among the finer Palms and such things, and thus produce a remarkable effect.

**Lilium Browni**.—The Messrs. Wallace brought to the Royal Horticultural show this week one of the finest displays of this Lily we have yet seen in a cut state. It is undoubtedly a noble Lily, vigorous, too, and of fairly easy culture in a deep bed of peaty soil or even peat and loam. The segments were finely coloured externally, which is one of the chief points of beauty in this noble kind. In the planting it is well to keep the bulbs some 4 inches under the surface, and by planting in groups between dwarf shrubs afford shelter for the young growth in spring. Beyond this it is not difficult to establish, though preferring a little distant shade to full sun. Once planted the bulbs are usually safe for two or three years, giving a little very rotten light manure as a mulch only each year in autumn.

**Phlox Coquelicot**.—At the present time there is a good collection of the garden varieties of Phlox in some beds near the T range at Kew, and this particular form stands out as the brightest of them all; indeed, viewed from a distance, the eye is at once arrested by its vivid colour. It may perhaps be best described as of a bright salmon-scarlet tint, with a shading of violet just in the centre. Though so superior, its merits do not ap-

pear to be very generally known, for I have looked for it in vain in two or three catalogues.

\* \* Is not this the variety which used to be grown many years ago under the name of Lothair? Lothair was in the collection of Phloxes grown in the Royal Horticultural Society's gardens twenty years ago, and its distinct shade of colour (orange-scarlet) always arrested attention.—ED.

#### SUB-TENANT HOLDING OVER.

I SHALL esteem it a favour if you can advise me under the following circumstances:—

1. I am at present occupying a small nursery of three acres in Surrey, of which for ten years I held an underlease (the latter expiring in March last) at a rental of £85 per annum.

2. Prior to the expiring of underlease I offered to renew the lease at £70 per annum. This offer, however, has not been accepted or refused, though in conversation with owner's solicitor a certain reduction of rent was regarded probable, £75 per year being mentioned.

3. As a full quarter has now elapsed since the expiration of underlease, I am anxious to know what rental in the absence of any agreement whatever can be justly demanded, and whether such would be regarded as a precedent in future.

4. In event of owner not conforming to my terms, what notice to quit (under the circumstances) am I compelled to give? I am told I occupy the position of yearly tenant and subject to six months' notice. Is this so?

5. Tenant from whom I underlease has now left; his tenancy was completed by me, and the owner I refer to above is really the owner. The land is covered with glass, in which produce for market is grown.—LEASEHOLDER.

\* \* When the tenant for a term of years holds over after the expiration of his lease, he becomes a tenant on sufferance; but when he pays, or agrees to pay, any subsequent rent at the previous rate, a new tenancy is thereby created upon the same terms and conditions as those contained in the expired lease so far as those are not inconsistent with a yearly tenancy. Although you are (or were) only a sub-tenant, your position is not really different from that of a superior tenant holding over; you are a tenant on sufferance and the landlord may at any time bring ejection against you. It was your duty to give up possession when the term of your lease expired, and you should either have quitted or have brought the negotiations for a renewal of the tenancy to a conclusion. You might have been unable to negotiate terms satisfactory to yourself, but in that event you should have quitted. Until rent is paid, or agreed to be paid, you are not a yearly tenant; you are and will remain a tenant on sufferance, and you are entitled to no notice whatever. Your landlord cannot recover any rent from you, but he can recover from you compensation for the use and occupation of the holding, and the amount recoverable is not necessarily the old rent. It will be such sum as the jury may find the occupation to be worth, and may be greater or less than the old rent. As your landlord's solicitor regarded a reduction of £10 a year as probable, it seems likely that the landlord will accept rent at that rate, as he evidently wishes you to remain as tenant, but, if he thinks proper, he may refuse to accept any sum less than he chooses to demand, and on your refusal may take his chance with a jury. You certainly cannot compel him to accept the reduction of £15 you required, and you should make the best arrangement you can with him. Such rent as you may now pay will continue to be payable, unless you enter into an express contract for some other sum.—K. C. T.

**The weather in West Herts.**—On each of the last six days the temperature in shade has risen above 70°, and on three of them exceeded 75°. On the other hand, most of the nights proved cold for midsummer, and on that preceding the 8th the exposed thermometer fell to within a degree of the freezing point, or lower than in any

July for ten years. Consequently the difference between the highest and lowest reading has on several days been unusually great. At 2 feet deep the ground is now 3°, and at 1 foot deep 5°, warmer than the average. For more than a fortnight scarcely any rain has fallen, and the soil is now becoming very dry, no measurable quantity of rain-water having come through either percolation gauge since the 10th. The atmosphere has been dry and the record of bright sunshine remarkably good, averaging for the week more than 10½ hours a day.—E. M., *Berkhamsted*.

**A singular Haw.**—I enclose a specimen of a Haw so singular in its appearance that very few, I think, would recognise it as the fruit of the White Thorn. It is, as you will see, very much swollen as compared with the others in the same bunch, and is covered all over with small woolly tufts, set in a very even and regular manner. Perhaps "G. S. S." might be able to explain what is the matter with it if he would kindly examine it.—W. M.

\* \* The Haw you sent is infested by a fungus, one of the cluster cup fungi (*Rustelia lacerata*). It is at times very common on the Hawthorn, on the leaves as well as on the fruit. If you can find another Haw which has been attacked and examine it with a magnifying glass, you will find a number of little so-called "cups" clustered together.—G. S. S.

#### PUBLIC GARDENS.

**Open space for Wandsworth.**—On Wednesday last, upon the motion of Mr. S. Creswell, it was resolved to ask the London County Council to take steps to secure the land abutting on the river Thames at Putney Bridge Road as a recreation ground for the parish of Wandsworth. The Board has already voted £10,000 towards the cost of the acquisition, which is estimated at £36,000.

**Open spaces.**—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., the Earl of Meath, chairman, presiding, it was announced that the association had completed the laying out of St. James's Churchyard, Pentonville, by means of a grant of £600 from the City Parochial Foundation, and that the ground was opened to the public by Captain Penton, the freeholder, on the 6th inst.; that St. Matthew's Churchyard, Bethnal Green, was approaching completion, and would be opened on the 20th inst.; that the gymnastic apparatus granted by the association had been erected at St. Nicholas' playground, Deptford, and that this ground would be completed and opened in about a fortnight's time. Progress was reported with regard to the laying out of the East Street site at Walworth, and it was stated that the association had received the gift of a handsome drinking fountain for this ground from Mr. L. H. Isaacs. It was agreed to renew a previous offer to lay out Christ Church Churchyard, Blackfriars Road, and a disused burial-ground in York Road, Walworth, provided their maintenance was secured. It was agreed to support schemes for the preservation of vacant sites near the Essex Road, Islington, and in Wandsworth, Bromley, and other localities, and to offer prizes for the best designs for durable yet artistic drinking fountains, costing not more than £50 and £100 respectively.

**Names of plants.**—*J. B. Wady*.—1, *Erica tetralix*; 2, *Erica cinerea*.—*J. Bennett*.—1, *Cypripedium Rothschildianum*; 2, not recognised.—*Arthur T. Bowles*.—*Genista tinctoria*.—*Bannerman*.—1, *Rose Boursault* "Blush"; 3, *Rose Maiden* Blush, not *Celestial*.—*Sophia C. White*.—1, *Campanula urticaefolia*; 2, *Campanula persicifolia*; 3, *Veronica buxifolia*; 4, *Veronica silicifolia*; 5, *Geranium armenium*; 6, *Alonsoa myrtifolia*.—*Alpha*.—*Gladiolus byzantinus*.—*A. G. Williams*.—*Scrophularia nodosa*.—*Robert Davies*.—*Diervilla canadensis*.—*Nicholas Markeu*.—Probably *Cupressus sempervirens*.—*T. Marsh*.—Specimens too shrivelled to identify.—*Amateur*.—*Lycaste Skinneri*, a good white form.

# THE GARDEN.

[JULY 21, 1897

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## ORCHIDS.

### ODONTOGLOSSUMS.

THE flowering of *O. Schleiperianum* and its varieties leads one to the consideration of the section of the genus to which it belongs, and with these only I purpose to deal in this note. Regarding their blooming season, they are rather erratic, especially *O. Inseleyi*, which I have noted at different places flowering in almost every month during the year. But from now onwards is usually regarded as the time to see them in beauty. Their natural habitat is in Mexico, Guatemala and Costa Rica, where, although at a greater distance from the equator than that at which the crispum types are found, the climate is warmer. Their treatment indeed is rather more like that of inter-tropical kinds than the purely alpine species named above, in that they like a certain resting season distinct from their season of growth. Not that they require dry treatment at the roots, for if this is long persisted in the plants soon show by their shrivelled pseudo-bulbs that the lack of moisture is not at all to their taste. What they like is a rather drier atmosphere, with a very free circulation of warm, dry air during the time growth is inactive. This is from the time the blossoms fade until growth starts in early summer, the actual time varying a little in the different species. Soon after, root-action becomes more brisk, and the plants may, if necessary, be repotted. Frequent disturbance is harmful, but the plants must not be allowed to remain in sour compost. The roots are larger than those of most Odontoglossums, and a wider pot is therefore required. A couple of inches margin all round the pseudo-bulbs is not too much, provided the plants are healthy and well rooted, the pots well drained, and the compost kept thin, rough, and open. Good peat broken into rough lumps, a little Moss, and plenty of crocks and charcoal will be the material for it, about a couple of inches of this sufficing for medium-sized specimens. A little more warmth

is beneficial after disturbance, the roots being stimulated thereby, especially if kept rather on the dry side and the atmosphere moist. The plants are not so fastidious in their atmospheric requirements as are the crispum and similar kinds, their wants being easily met in a house kept at a night temperature of about 55° while growth is active, rising about 10° by fire-heat, and rather more in bright weather. Shade is an important point, and the blinds should be kept down at this time of the year until the sun has left the house. While at rest more light is required, but bright sunshine must even then be partially excluded. Insects of most kinds are very fond of all the plants in this section, so cultivators will do well to be on the look-out and ready with preventive measures. Perhaps the best known of all this class of plants is

*O. GRANDE*, a superb Orchid when in good cultural condition and well flowered. The spikes on the strongest plants contain from six to eight flowers, these measuring about 5 inches across, the sepals and petals bright golden yellow, heavily blotched with brown; the lip whitish in ground colour and similarly marked. The bulbs are roundish, deep green, each bearing a pair—sometimes three—of nearly oblong leaves, lightly spotted when young. It comes from Guatemala, and first bloomed in England in 1841 with the Duke of Bedford, but this was several years after its introduction.

*O. INSELEYI* is a lovely Orchid in its better forms, and bears a considerable resemblance to the last named in growth. The flowers are smaller, of varied tints of yellow in the ground colour of the segments, which are not so heavily blotched with brown as those of *O. grande*. The lip has a belt of bright red spots on a golden yellow ground colour—a bright and beautiful combination. There are many named forms, of which *O. I. splendens* is perhaps the best, a large and very highly coloured variety by no means common in cultivation. *O. Inseleyi* is a native of Oaxaca, in Mexico, and is named after the gardener of the gentleman who introduced it in 1839. It was at that time, however, very rare, and afterwards almost lost to cultivation, but about

twenty years ago and at frequent intervals since it has been imported in large quantities.

*O. SCHLEIPERIANUM* is another variable kind, not so large as *O. grande* and a little different in shape. The petals in some varieties are almost wholly yellow; in others there are blotches of orange, more or less clearly defined, on a yellow ground, but all are useful garden Orchids. It first flowered in this country about 1856, having been imported from Costa Rica among other species, and was named by Reichenbach after H. Schleiper, a German Orchid grower. The blossoms of all the species here described have a great likeness one to another, and, as noted above, the plants thrive under similar conditions. If the plants are healthy, no harm is done by leaving the flowers on until they fade, and as they last a long time in full beauty their value in keeping up a late summer and autumn display is obvious.

*Lælia Latona*.—I noticed a very fine plant of this beautiful hybrid in Messrs. Charlesworth's exhibit at the Temple show. It was bearing six flowers, the largest about 5 inches across. *L. Latona* was raised by Messrs. J. Veitch and Sons, who obtained it by crossing *L. cinnabarina* with *L. purpurata*. As may be imagined, it is a highly-coloured flower, the sepals and petals narrow, of a pretty light orange. The labellum is delicately margined with deep orange, its undulate form giving it the appearance of being fringed. The front lobe is crimson-purple, and the base is creamy white. As usual, I think with hybrids having *L. cinnabarina* as one of the parents the influence of this species is very apparent.—R.

*Lælio-Cattleya Lady Wigan*.—This is a remarkably fine hybrid, and the opinion of more than one expert Orchid grower was that it was the best exhibited at the Temple. It is the progeny of *L. purpurata* *Russelliana* and *Cattleya Mossiae* *aurea*, and combines the excellent qualities of its parents in a remarkable degree. An object-lesson as to how these strong-growing hybrids progress was afforded by the plant from Messrs. Charlesworth and Co., of Heaton, Bradford. The oldest of the four pseudo-bulbs was not a quarter the size of the one now flowering, and a young growth just pushing gave even greater promise

The contour of the blossoms rather favoured *L. purpurata*, the sepals and petals, of a rosy white shade, being well thrown back. The lip was large, of almost circular outline in front, with a frilled margin, pink in the ground colour, with veins of deep crimson-purple; the throat rich yellow and lightly spotted. The colours are soft, yet clear and well defined. It is an undoubted acquisition to this rapidly extending genus.

**Dendrobium revolutum.**—In the choice group of Orchids exhibited by Sir Trevor Lawrence at the Temple show was a plant of this species, carrying a good number of flowers upon three out of the four bulbs of which it consisted. In habit as in the manner of flowering it somewhat resembles a weak *D. Dearei*, but apparently the flowers occur singly instead of in racemes. The sepals and petals are short and of the purest white; the lip distinctly three-lobed, and very broad in comparison with the other parts of the flower. In colour it is a pale green, the centre lobe having a median line of clouded white, streaked also with brown. Although it cannot be described as a showy species it is decidedly pretty and free-blooming, and not a mere botanical curiosity.

#### LELIA PURPURATA.

This popular species might be very much better cultivated in many places were a little more thought given to minor details of management. These consist in timely attention to cleaning, repotting, and various other items that are in many cases gone about in a thoughtless manner, yet with a rule-of-thumb kind of precision. Orchid houses, as generally understood, are small stuffy places, little suited to these denizens of the forest. Inexperienced and self-satisfied cultivators say that their plants do very well in the structures provided for them, forgetting, perhaps, the fact that these were in good condition at the start, and a season or two in such places is no criterion. But take the average plants as met with in small houses and the same as seen in large collections of private persons or nurserymen, where a roomy structure is set apart for these and their new congeners, the Cattleyas. In the former case the plants have been so shaded that the growth is poor and far from free-flowering, or else burnt up by having been grown with their heads almost touching the glass when the sun has been shining upon them. Either of these cases contrasts badly with a similar lot of plants grown in a house where there are no such extremes, and where the plants can be arranged with their heads a yard or more from the roof. But while gardeners cannot alter their houses, there are many gardens where the plants may be removed to vinerias, Peach houses or similar places during the summer months with no detriment to the occupants of such structures, and a great advantage both to themselves and the other Orchids left behind. In the winter, when they are, comparatively speaking, at rest, they may be returned to the old quarters, remaining here until growth has again started. Those who have neither large Orchid houses nor any other structures where the plants have plenty of room must do the best they can with the means at disposal, and they will find early morning ventilation of great assistance, by keeping the foliage cool and obviating the necessity of shading until the sun has been shining on the plants a little while. If the sun is allowed to shine on the foliage with the night moisture still about it, the leaves scorch almost as quickly as Vine leaves similarly situated.

*Lælia purpurata* is not so constant in its habits as species like *L. superbiens* and many of the Cattleyas. Often when one is least expecting it comes a free emission of young roots;

often, indeed, when one does not want them, for in many cases they are precursory to the growths starting that would be better kept dormant during the dull winter days. Sometimes they send up a sheath in autumn, and from this push a spike of flower in early summer; at others they keep quiet after blooming, and flower upon the newly-formed pseudo-bulbs. For this reason it is not wise to set any exact season for repotting, but to do this when it is apparent that no check will be given, and that the plant will soon take to the new material. Repotting ought not to be done oftener than is really necessary, and no disturbance of the roots need take place other than what is necessary to remove old or sour material. Large old-established specimens need careful handling and judicious management afterwards, or more harm than good will result. The plants are often so well supplied with roots, that the whole of the old compost and drainage material is firmly enwrapped. Doubtless in most cases there will be a little towards the centre of this ball of roots that is not quite as it should be, but to get at this means breaking many of the outer tiers of healthy roots and thereby endangering the health of the plant. Here let well alone is the safest policy, and by allowing a fair shift and filling up with new material of good quality, the plant goes on again for several years. For compost use good peat and fresh Sphagnum, adding thereto abundance of roughly broken charcoal and crocks. Never let the plants suffer from want of water during the resting season, as this weakens them considerably. While growing they take a very free supply. After disturbance, water carefully and very lightly until new roots are starting, while no overhead sprinkling is allowable during dull or wet weather. Keep the atmosphere well charged with moisture while the growth is active, and never allow insects to obtain a hold on the plants.

There is a large number of named varieties of *L. purpurata*, all more or less distinct from the type and all capital garden Orchids. Its native home is in Santa Catherina, in Brazil, where it appears to have been discovered by a collector in the employ of M. Verschaffelt, of Ghent. This was in 1847, and since then it has been so freely imported by various firms that it is now one of the best known and useful in the family.

#### SCHOMBURGKIA TIBICINIS.

As showing how nearly related are some genera of Orchids, it is difficult to tell the difference at the first glance in the habit of this plant and a *Lælia superbiens*, while the spikes are similarly produced, the flowers also being much alike in structure. There is no difficulty in growing *S. tibicinis*, though with some growers it does not flower very freely. Sometimes this is the result of not ripening the growth thoroughly. What this species delights in during the growing season is a house kept nicely warm, yet with abundance of air left on, this consolidating the growth as it is produced and tending to hard pseudo-bulbs and plenty of flower. The pseudo-bulbs being quite finished, the plants may be stood nearly in the full sun and the water supply reduced by degrees, until in winter hardly any is needed. It would be unwise to dry off badly-ripened plants, for these would at once shrivel, but with those treated as above described it is surprising how little water they take while resting. The growth commences in early summer, and should the compost be in bad condition the plants may then be repotted. Use lumps of peat broken in various sizes, according to the size of the plant, and plenty of Sphagnum Moss, of which latter the roots seem very fond. Add roughly broken char-

coal and crocks and drain the pots thoroughly, protecting the drainage with a little rough Moss. Keep the leads as near the centre of the pot as convenient, and the line of compost may be finished a little above the rims, forming a cone, on which the base of the new bulbs should just rest. The habit of the plant is nearly erect, the stems about 18 inches high when strong, with two or three large ovate, green leaves. The long spikes of flower appear between these, and attain a height of 4 feet and upwards. The flowers are variable in size, those of a good form measuring over 3 inches across, the sepals and petals prettily undulated at the edges, of a bright rosy purple tint, becoming lighter at the base and of a brownish tint at the tips. The column is not enfolded by the lip, but stands exposed, the side lobes of the latter being yellow with streaks of deep purple, the front lobe white, with purple venations and margin. It flowers at various times through the late spring and summer, the blossoms lasting about a fortnight in good condition. It is a native of Mexico and Central America, having been first discovered by Mr. G. Ure-Skinner in Honduras. It first flowered in England in 1840 with Mr. Bateman.

**Epiphronitis Veitchi.**—This quaint yet beautiful little hybrid seems to be nearly always in flower, and we noticed several plants of it recently in Messrs. Veitch's nursery. It partakes most of the habit of its pollen parent, *Epidendrum radicans*, but the glowing tint of the flowers also shows the influence of *Sophronitis*.

**Oncidium pulvinatum.**—This is a beautiful and free-blooming *Oncidium*, the long branching, many-flowered spikes having a fine appearance, and the small branching bits are very useful for cutting. It grows with great freedom in either pots or baskets suspended from the roof, and in this way the blossoms show to great advantage. About equal parts of peat fibre and Sphagnum Moss over good drainage suit it well, and plenty of water must be given while growing.

**Peristeria cerina.**—This is by no means so frequently seen as *P. elata*. The habit is not unlike that of the last named, though not usually so vigorous; the spikes are pendent and crowded with flowers of a deep yellow, dotted about the lip with crimson-purple. During the growing season this Orchid requires the heat of the Cattleya house, and must be very freely watered at the roots. A decided rest must afterwards be allowed or the plants fail to bloom freely. The present is its flowering season.

**Epidendrum vitellinum.**—This I noted in good condition this week, a plant in a 5-inch pot having seven spikes each bearing a large number of the brightly tinted flowers. The bright scarlet and yellow of these blossoms have a fine effect against the deep green foliage, and the length of time the flowers last makes it a most desirable garden species. It is of the easiest culture, growing freely in a mixture of peat and Moss in a cool, moist temperature all the year round. It is a native of various parts of Mexico, and is usually found at a considerable elevation.—R.

**Promenæa stapelioides.**—Although not a showy plant, this little Orchid is worth a place in collections. The habit is that of a very small *Lycaste*, and the pretty blossoms occurring from the sides of the pseudo-bulbs are rather a pretty combination of yellow and purple. It is of fairly easy culture in a nicely-tempered cool and moist house where the light is fairly clear, and where very little sun can reach the rather tender foliage. The plant is very impatient of anything like a close or sour compost, and for this reason repotting is usually necessary at least once in two years.

**Epidendrum Frederici Gulielmi.**—The deep purplish-red blossoms of this species are very attractive, but the plants have rather an ungainly habit. The stems are a yard or more in height, about as thick as one's finger, bearing leaves each about 6 inches in length. The flowers

appear on terminal racemes, and are each about a couple of inches across. Its cultural requirements are a clear light in a warm, moist house where it can have plenty of head room. The roots may be confined to medium-sized pots in a well-drained compost consisting of peat and Moss, and must be kept fairly moist all the year round. It was discovered many years ago, but until recently was somewhat rare.

**Zygopetalum rostratum.**—It must be confessed that this is a difficult plant to keep in health for any length of time. The pseudo-bulbs and leaves are small and extremely apt to be checked by the least deviation from the proper atmosphere or by undue disturbance. Undoubtedly the best way to grow it is on a piece of tree Fern stem, the natural roughness of this material forming a good roothold and obviating the necessity for frequent removal. It is a pretty plant when in bloom, the flowers rosy-purple and white in a pretty and effective contrast. Coming from Demerara, plenty of heat and a very moist atmosphere all the year round suit it, and its habit will not allow of a long dry rest.

## KITCHEN GARDEN.

### SAVING SEEDS.

In your issue of July 3 (p. 3) an article on "Saving Seeds" by "C. C. H." seems to me to want a reply from some practical seedsman. While a long experience has made me familiar with the difficulties of saving choice stocks of vegetable seeds, I cannot allow that "nurserymen cannot afford to rogue their stocks too rigidly." All seedsman of any note do so most carefully, and, speaking for my firm, we find buyers perfectly willing to pay a fair price for selected stocks—i.e., dependable selections—and some of these have been in our hands for thirty or forty years, and are perfectly true to type, while we readily seize on any improvement that can be effected, and we are convinced others do the same. Then you may say, "Why are there so many inferior stocks in the country?" Simply because the competition in the seed trade, wholesale and retail, is so keen, and there are a lot of retail dealers—chemists, grocers, ironmongers, &c.—who do not "know" the business, but buy the cheapest, and retail so as to cut one another in value. The wholesale people must meet this demand, and as labour and rents are heavy in Britain, many seeds are sent abroad to be grown, and in many (not all) cases that care and attention are not given to isolate crops that those who have large holdings in Britain can give. Again, the growth of allotments makes the business more difficult, as it is not unusual to see Cales, Cabbages, Sprouts, &c., all flowering at the same time. The burden of this is, if the public will pay a fair price they can command a genuine article, and far better than any home-saved stocks as a whole.—GEORGE BUNYARD.

The notes on the saving of vegetable seeds by "C. C. H." (p. 3) were interesting as well as instructive reading, as pointing out the great uncertainties of the work unless the utmost care in preventing insect interference is given. I have only attempted seed-saving on a small scale, preferring to leave such in the hands of those having large experience and facilities for carrying it out successfully. An experience gained some few years since, which exactly coincides with the incident given by "C. C. H.," made me resolve to leave seed-saving of the Brassica family alone. What I purposed saving a seed-stock from in that case was a particularly good Broccoli, and having no other of the Cabbage family in bloom in the garden at the same time, I did not deem it needful to protect it from insects. But the mistake made was only too apparent. When the produce should have given first-class marketable Broccoli the following year, it could only be used in the same manner as Chou de Burghley. The mischief must have been done by bees carrying pollen from some distant cottage garden or allotment,

owners of which often save seeds of some favourite winter greens. Had I taken the precaution to have enclosed the plants during the flowering period in muslin or some similar insect-resisting material, all would have been well, no doubt. The lesson, however, made a lasting impression on my memory, and I would strongly advise anyone contemplating the growth of seeds in a private garden to protect the plants from being fertilised by foreign pollen, carried, it may be, long distances by bees. "C. C. H." does not say that his friend took the trouble to exclude bees, even when the lodge-keepers were entrusted with their growth, so as to isolate the several kinds under treatment, although the case of spoliation which happened with the nurseryman proves conclusively that some such course is necessary. Onions, although much frequented by bees while in flower, do not seem so easily affected as the Brassica family, for having saved my own seeds of this vegetable, and in two or three varieties, I have found them come quite true to character without any attempt at the exclusion of bees. It is not often that in purchased seeds one gets this loss of character through accidental cross-fertilisation, but it has actually happened with me this summer, the variety ordered being the invaluable late winter green, Asparagus or Buda Kale. I always sow this on the plot where it is intended to mature in the same manner as one does Turnips, as it is not so readily transplanted as other varieties, and I do not in any case put in the seeds until June. I have had to destroy almost the whole of the plants thus raised this year, there being but very few true ones to be found, the majority favouring the Couve Tronchuda in appearance more than anything else. I have sown fresh seed again, which, although late, may yet be in time to be useful in late spring next year. This seed, I should have said, was obtained locally, but was grown in the eastern counties.—W. S., *Wills*.

**Early Cabbage.**—There have been many complaints regarding the lateness and bad hearting of Cabbage, but I have not much reason to complain—no "bolting" nor losses of any kind have been sustained out of five or six sorts. Earliest of all has been the favourite; close hearting, few outside leaves, fine quality, and earliness are its properties. I believe in well-manured ground for Cabbage, with a free root run on deeply dug or trenched ground. On poor soils where the roots of Cabbage cannot work freely, running to seed is greatly encouraged. Rosette Colewort is not so much grown as it should be; it is one of the hardiest of Brassicas, and can be had (by successive planting) from autumn till late in the spring. In July and early in August planting may begin. I have a letter from a friend in Staffordshire who says this Colewort was never seen injured by frost in that district, where it has so often been grown with great success. No test as to hardiness of any plant (grown in the open during winter) can be greater than here. On cold heavy soil below the level of the river Forth, this neat little Colewort stands uninjured.—M. TEMPLE, *Carron, N.B.*

**Early and late Peas.**—After growing Chelsea Gem for several years, it holds its own against all comers as an abundant bearer of good quality, and is ready for use as early as any I have tried. Some peas of reputed earliness are too small in pod and too dumpty in form for cooks to be bothered with them. I have always favoured well-tilled ground for Peas; they are thus protected from drought, and during wet seasons they do not get water-logged. It is a good plan, where such can be afforded, to cover peas, when sown in drills, with decayed vegetable refuse, or a mixture of decayed manure and waste soil of any kind. Seldom have I seen drought or mildew attack Peas with a covering—say, 3 inches thick—of such material over them. Even in the south of England they do not often suffer. Watering often does more harm than good to the crop, as by continuous surface dribblings the soil is battered hard and the Pea roots severely checked. With

all the excellent additions to the lists of Peas, the most popular among old sorts Dr. McLean, Champion of England, Ne Plus Ultra, Sangster's No. 1, and Dickson's Favourite—are often seen among the winning lots at exhibitions.—M. TEMPLE, *Carron, N.B.*

**Lettuce running to seed.**—In few seasons have Lettuces bolted so badly as this. The Spring Cos varieties, owing to the drought, bolted badly, and since then the Cabbage varieties are worse, as, no matter what care is taken in watering in our light soil, they run wholesale. It is not a question of variety, as all are alike, and even on a cool north border transplanted plants are not reliable. Doubtless it is caused by the sudden changes of weather. I am aware there is a remedy, but it is not always convenient to sow Lettuce to stand without transplanting, and I notice this season, even with sown plants, they run worse than I have known them in previous years. I sow every three weeks, from May to the end of July. Some of your readers may have had similar failures and have found out a remedy. I have in previous seasons depended upon sown plants for mid-summer and July use, but this season they have failed, the Cabbage varieties being the worst.—S. H. B.

**Late Broccoli.**—I have been much interested in reading recent notes which have appeared in THE GARDEN on this subject, as I am rather a large grower of late Broccoli. The kinds mentioned by your correspondents have not been tried here, and I rely entirely on Maincrop, Dickson's Late May, and Model for late supply. The seed of these three kinds is sown in the second week in May each year, and the plants are generally set out on a piece of ground just cleared of a crop of second early Peas and early Cauliflowers. The ground receives no preparation beyond hoeing to free the surface of weeds, and the soil being firm, the plants make but medium growth. In the month of October the plants are all heeled over towards the north, and the percentage of losses from severe frost during the winter is but small. The three kinds named afford an unbroken supply of good heads from the commencement of May until the middle of June, by which time the earliest Cauliflowers are ready for cutting. Model is the last to come into use and, strange as it may seem, this variety is preferred to all others, Cauliflowers included, for pickling. Being but a medium and very dwarf grower, the plants of Model may be set out a trifle closer than would be admissible with the more robust-growing kinds—a great desideratum where space is limited.—A. W.

**Medium-sized Peas.**—Many people object to extra large Peas, and as the majority of the new varieties are of that type, one has to go back to older sorts. I am growing Fillbasket this season, and shall do so in future—for the dining-room, few varieties, all points considered, surpassing it. Its dark green colour and sweet flavour are strong recommendations. Further, its height is most convenient, and its cropping qualities are wonderful. Previous to the large-podded Peas being introduced I used to grow Fillbasket in a shallow trench, mulching and feeding when bearing a crop; and the handsome curved pods looked well dished up for exhibition. I wonder this old Pea has not been more generally grown for market, as I am certain it would prove most remunerative. Another, and a most excellent, medium-sized variety, and one which should be grown in every garden on account of its productiveness and general good quality, is Criterion. Its size and deep green colour remind one strongly of Ne Plus Ultra, the usual height of the haulm being from 4 feet to 5 feet. Criterion is a capital dry weather Pea, and grows well in light, porous soil. Gardeners who have tried it have made it a rule to include it afterwards in their seed list. A Pea called Nottingham Wonder, better known in the midlands than elsewhere, is another of the medium-sized varieties. The haulm is very vigorous, reminding one of that of Antocrat, some 4 feet high, and covered with pods in all

tages, the colour excellent and flavour good. More mid-season medium-sized Peas exist, but they are none too plentiful. The three above named will please all who may try them.—J. C.

#### QUALITY IN PEAS.

Of late years there has been better quality in Peas, especially in early or second early varieties, and with good quality we have got a dwarf habit with large pods. For some years past I have grown Peas largely, and have endeavoured to get those which are able to resist our variable climate. Most growers will agree with me when I state Peas are hardier than many persons think. Peas not raised in heat and always exposed have not suffered from frost when the tops are a few inches out of the soil. I am aware in cold, wet soil the seeds suffer, and this is a point we must not overlook, and with the newer types with Marrow blood means must be taken to assist rapid germination. I am not in favour of autumn sowing. A Pea—Springtide—noted in these pages last week (p. 4) is a very early variety, and far in advance of the smaller kinds. In this note I have no desire to condemn old varieties or extol new ones, but I am an advocate for progress, and with no vegetables have there been greater strides than with Peas. This is of great benefit to those who have limited space and who need to grow their crops quickly. The best quality Peas among the newer types are those which run from 2 feet to 4 feet, mostly between those heights, and as some of these are equal in size of pod to the Duke of Albany, there is a great advance. I do not look upon the Duke of Albany as a good quality Pea; had it not been for its exhibition value it would never have found the favour it did. I am not a lover of any Pea which gives its crop on the top of the haulm all at one time, and if not gathered quickly it is of poor quality. What I term a good Pea keeps up a succession of pods. The best Peas are those which yield well from the base, and as many of the newer varieties do this and may be termed continuous croppers, there is a great gain to the grower, who, if he sows thinly and feeds freely, can get a much heavier crop than from the small white or blue early Peas, or the very dwarf forms only a few inches above the soil. These latter may have been useful before these later introductions, but, like the many selected earlies of Early Sunrise type, they are out of date if quality is considered. I noted recently in these pages a well-known authority on Peas had scant praise for some of these first earlies, as they are termed, and I certainly think where quality is considered they are out of place. Much time and labour of late years have been bestowed upon garden Peas, and with size a dwarf habit is secured. There is now no need to grow 6-foot or 7-foot Peas even for midseason or late crops; the newer kinds are equally prolific, with a dwarf habit.

S. M.

**Onions in 1897.**—It was recently remarked in THE GARDEN that Onion crops sown in spring were this season exceptionally free from maggot and disease of all kinds, and promised to be heavy and good. I can corroborate this so far as my own neighbourhood is concerned, many plots on light, shallow soils, where great difficulty in securing even half a crop has usually been experienced, looking just now very healthy, with no blanks in them. The fact that there was much more moisture in the ground from autumn and winter rains, together with the unusually cool spring, is put down generally as the chief cause of this improved state of things, the general belief being that if the plants are able to grow to a certain size without molestation to the stage—in fact, when they commence to bulb—the Onion maggot will not molest them; at any rate, to any great extent. That this idea is perfectly correct is, I think, plainly proved by the fact that those gardeners who have of late years sown their seed in boxes in February, hardened the plants off in frames and planted out early, have had no trouble

in securing good all-round crops of Onions. One or two gardeners I know raise and grow the whole of their spring crop in this way, ignoring the extra labour—which, indeed, is not so great as some might imagine, as seedlings raised in a genial temperature give very little trouble, beyond a sprinkling to keep them moist, till transplanting time arrives, the ground being prepared some time previous to give it a chance to settle. A handy man will soon plant out a few thousand seedlings. Where this plan is adopted, the labour of thinning out—as is the case when seed is sown in the ordinary way—is avoided, and, all things considered, there is little difference in the long run so far as labour is concerned. On shallow, hot soils this system is undoubtedly the best.—J. CRAWFORD.

#### FLOWER GARDEN.

##### NARCISSUS MME. DE GRAAFF.

I look upon Mme. de Graaff as one of the best of new Narcissi. There may be others more distinct and striking in colour, but its perfect form, robust constitution and wonderfully free-blooming habit will keep it in the front rank of the choicest Daffodils when many of its competitors are forgotten. Besides the good qualities above mentioned, this variety increases rapidly and grows almost as strongly as Emperor or Empress. The segments of the perianth are pure white, of good form and firm texture. The trumpet is pale sulphur and has a peculiar appearance, unlike that of any other Daffodil. The brim of the trumpet is rolled back, which gives the bloom a distinct character. If the flowers are cut in a young state and opened indoors they will be almost perfectly white. When this Daffodil can be bought at a cheaper rate than at present obtains, it will no doubt be very freely planted.

J. D. PEARSON.

Chilwell Nurseries, Notts.

**Lychnis chalconica.**—It is not easy to surpass the handsome heads of brilliant scarlet flowers this plant is capable of producing when well grown in deep rich soil. It is at such times one of the most striking of hardy perennials, and one of the easiest to grow or increase by seeds.

**Campanula turbinata alba.**—A most useful variety early in July that may be planted in rock garden or border. The habit is very neat and somewhat dwarfer than in *C. carpatica* or its white variety, while it usually precedes these latter in the time of flowering. But even if they came together they are sufficiently distinct to be useful.

**Tufted Pansy Violetta.**—This excellent variety is now in fine form. Small pieces which were propagated very late last season, and which also looked very insignificant and unpromising early in the present season, are now all that one could well wish for. The growth has lately been very rapid, and they have already filled up all the space between the plants. A careful mulching early in June was much appreciated. This pretty little rayless white variety is being used very freely in the gardens at Regent's Park, and appears to lend additional charm to several long narrow borders of Fuchsias as a carpeting plant. The white is very pure, and this together with a splash of yellow on the lower petal makes the display more effective. It is also sweetly scented.

**Gladiolus The Bride planted out.**—Reference was made a few weeks ago to the value of this chaste Gladiolus in summer, the writer stating that it did well planted out in open borders. I used to think this might be done in the south of England, but was quite surprised a few days ago to see a truly magnificent lot in a Newark florist's window just cut from the open nursery beds. Thousands were planted, and nearly all of them

have grown and flowered well. The position is a sunny one and the ground somewhat sandy and well drained. It seems to dislike cold and wet, therefore the season may have suited it; artificial waterings, of course, having been given, the rainfall in this district having been small. The florist in question finds that the flower-spikes open all the way up, even though half of the blooms may only be in the bud state when cut.—J. C.

##### PRIMULA TRAILLI.

In your last issue Mr. R. Dean contributes a note on this plant, criticising those of us upon the floral committee of the Royal Horticultural Society who thought that the plant sent up by Mr. G. F. Wilson was entitled to rank as a new species, and not merely as a variety of *P. involucreta*. Allow me to point out—for the question involved is of constant recurrence and of general interest—what I regard as the fundamental fallacy of his reasoning. He evidently assumes—as I think he will admit—that the character and extent of those differences which entitle to specific as distinct from varietal rank are matters not of individual opinion merely, but of recognised scientific precision and certainty. I am under the impression that that view was long ago exploded among plant physiologists. If Mr. Dean can show me to be wrong, and can indicate a finer scientific principle, widely recognised, by which it shall be decided whether a new form is to be deemed a new species or merely a variety of an existing one, he will both surprise and oblige me. He and I see a plant differing structurally more or less from those hitherto tabulated. He and I answer the question, "species or variety?" if we answer it at all, by making up our minds whether the differences are solid enough to justify the creation of a new species. And our minds may be differently made up without either of us being able properly to claim that for any assignable reason he is right and the other wrong. The case is not altered by the fact that certain characteristics—for instance, colour of flower—are generally admitted not to entitle to specific rank. Nor is it altered by the fact that more persons agree with me than with him on any such question. What is no doubt wanted, and very badly wanted, is the recognition of some standard authority whose decisions in such matters—albeit necessarily arbitrary—shall, as matter of convenience, be accepted by all. But those most fit for the office (*e.g.*, the Kew authorities), would, I take it, be the first to insist on the necessarily arbitrary character of their decisions, in regard, that is, to new plants.—H. SELFE-LEONARD, *Guildford*.

—I read Mr. Jenkins's note at p. 36 with the greater interest knowing that he has had considerable experience with herbaceous and alpine plants. The drooping of the plant exhibited was caused only by want of water, and by the Drill Hall being more than usually hot and stuffy, as it seemed to me, though I have not been able to attend there often lately. The flowers soon held up their heads on the plant being watered when it got home. I presume *P. Trailli* was not mentioned at the *Primula* conference, from being unknown in this country. If the plants raised by "R. H. B." last year from seed sent him by Dr. Watt were no finer than those we had then from seed sent by my botanist friend (not Dr. Watt), I do not wonder that Dr. Watt, if familiar with the *Primrose* in its proper form, should have said that "they had nothing in common with his *P. Trailli*, which was a much larger and handsomer species." This last description would exactly apply to my plants of this year. My experience agrees with "R. H. B.'s," as the plants after blooming and ripening seed are flowering again, but with weaker flowering spikes. It is certainly a more free-flowering *Primrose*, and though, of course, it cannot be compared with the more showy members of its family, such as *P. japonica*, it has a quiet beauty of its own, which, combined with its very sweet scent, will, I think, make it a favourite, at least with amateurs.—GEORGE F. WILSON.



*Narcissus Mme. de Graaf.* From a photograph by Mr. J. D. Pearson, Chilwell, Notts.

## SOME USEFUL ANNUALS.

ALTHOUGH many flower gardens are now nearly filled with perennials, and things of a transitory nature are but sparingly used, there are some annuals so useful for cutting, and also some that make such a bright and, for the one season, such an enduring display, that one can hardly dispense with them. There is a tendency sometimes to think that whilst perennials must be well provided for, annuals of any description can be allowed to shift for themselves; but if we remember that the majority are vigorous both in root and foliage, and will flower under favourable conditions for nearly four months, it is reasonable to conclude that they require a very considerable amount of sustenance. *Gypsophila elegans* comes considerably earlier than the perennial form even under a north wall, and from that site I started cutting in quantity the last week in June. I like to make two sowings of this, the one in the open in the site above named, where the plants grow strongly and throw some fine heads of flower, the other about a month earlier under cover, from whence the plants are removed to well-prepared patches on the open border, and where they come early into flower if care is taken in the removal. Its chief value lies in the light and graceful panicles available for cutting early in the season. It is not a long-enduring annual, and I should not recommend its use for prominent places in the flower garden. Iceland Poppies pay for early and thin sowing under cover. They should be handled carefully in the pricking out, so as to disturb the roots as little as possible, and when the plants are ready for the open border they should have a thorough soaking and be lifted with a nice mass of roots. It is not advisable to use any members of the Poppy family in vases that are only filled bi-weekly, but they come in very useful for dinner-table work or anything of a similar nature where they are only needed for the day or evening, as the case may be. The fact that this particular variety is, from a flowering standpoint, of long duration is sufficient to lead to the conclusion that it wants a bit of good soil, not necessarily rich, but of the quality essential to produce good vegetables. Seedling Carnations are just now among the best for cutting. They are from seed that I did not obtain until rather late in 1896, and the plants consequently only threw one, or at most two flower-stems last season. They made, however, a fine lot of grass, and looked so promising that I decided to let them remain, with the result that they all came safely through the winter and are now a mass of flower, some of the varieties being very good and all as yet non-splitters, the colours out at present being scarlet, rose, and primrose selfs, and flaked in great variety. It is worth noting that while among the named varieties, over which a lot of trouble was taken in the way of layering, lifting, and replanting, there was so much loss, the seedlings should have proved perfectly hardy. It is essential when dealing with annuals to cater for the popular taste, and the three already mentioned are great favourites; so, too, are Gaillardias. Given the most careful attention and early sowing, the annual forms do not flower so early as the perennials, but when they do come there is a very gorgeous display, only rivalled, I think, by the best strains of *Salpiglossis*. They stand very well when cut.

*Linum grandiflorum* supplies at the present time the colour to be found later in masses of scarlet Begonias and Pelargoniums. Given good treatment, it is a long-enduring annual, and one of the best for filling portions of borders in outlying parts of the garden. A liberal dose of manure, deep tith, and early thinning to a foot each way are conditions essential to successful culture. Although Petunias do not come under the heading of those things useful for cutting, they rank together with Verbenas, as about the best of the *bona fide* bedding annuals, possessing the merit of being easily grown, coming quickly into flower, and lasting out well to the end of the season. Very great improvement has been effected within the last few years in Petunias both in the way of

introductions and in hybridising. I measured lately some flowers of Carter's Empress quite 5 inches across, and the colours vary from a slightly shaded white to an intense purple, with a very richly marked throat. The growth being proportionately strong, it is advisable if the plants are pegged to get them down as early as possible; if allowed to make considerable headway, it is difficult to perform the operation without snapping them at the collar. I was rather amused the other day when making a tour of inspection of cottage gardens to meet more than once with the remark that the flowering season of the Sweet Peas was very brief, coupled with the information that the growers liked to save their own seed—a fact, by the way, plainly evident from the countless numbers of seed-pods that were hanging. If this is allowed to go too far it is difficult to pull the plants round, but if the foliage is still fairly green and there are indications of growth, it may be effected by the removal of all seed-pods, a thick mulch of good manure, and a thorough soaking with water. There is no mistaking the fact that Sweet Peas amply repay a little careful attention. In the newer varieties, with an improvement in the flower come a greater vigour and length of stalk, making them of additional value for cutting. E. B. C.

**Tufted Pansy Ardwell Gem** appears to be in excellent condition just now. Small plants which were put out quite late this season are growing freely. Although given a distance between each plant of 15 inches, the dwarf creeping form of growth has already filled up the intervening space, and the plants are flowering most profusely. It is an ideal sort for the flower garden, and although somewhat old, yet compares favourably with many of the newer introductions. —H. N.

**Tufted Pansy Princess Louise** is now at its best, the cooler evenings of the last week benefitting the plants considerably. This only goes to prove that this variety is one very partial to cooler weather, and this probably accounts for the plants looking so well during the early part of August, 1896, when it was credited with a first-class certificate by the Viola conference committee. The form of growth is compact and tufted, the constitution robust, and the flowers of medium size and good form. There is no trace of rays in the flowers at the present time, and the plants are literally covered with charming blossoms. —D. B. C.

**Tufted Pansy Florizel.**—This fine variety should be grown by all who are interested in these useful plants. The flowers are of large size, very neat and pretty. The colour varies slightly under the very trying climatic conditions which prevail in the south of England. In cooler quarters and where partial shade can be given the colour may be described as a very pretty bluish-lilac. Very hot sunshine bleaches the flowers, so that the colour is less pronounced. This slight defect, however, is not sufficient to deter anyone from taking this variety in hand, as it is deserving of one of the foremost positions in every selection. The blossoms are rayless, with a neat yellow eye. The growth is beautifully tufted, and the constitution is also good. —D. B. C.

**Lilium Roezli.**—This rare Lily is just now flowering at Kew, where, in a bed at the back of the Palm house, it seems to be quite at home. It is nearly related to *L. pardalinum*, and might perhaps be regarded as a variety thereof, but in colour at least it is quite distinct from any of the forms of *L. pardalinum* that we have in our gardens. In *L. Roezli* the leaves are long and narrow, and though occasionally borne in whorls, as in many of the Martagon section to which it belongs, in most instances the whorls are broken up and the leaves scattered in an irregular manner around the stem. The flowers are about the size of those of *L. pardalinum*, with the segments much reflexed. The colour is a bright yellow, the central portion dotted more or less with small purplish brown spots. They are borne in a

somewhat pyramidal-shaped raceme, each bloom being supported on a long stalk. This Lily is a native of California, from whence it was introduced in 1871 by the collector whose name it bears, but it has always been scarce, and at times there has been a certain amount of confusion with regard to it. The bulbs of this are rhizomatous, a feature limited to those species that are natives of North America. A soil composed of at least a fair amount of vegetable matter and a moderately moist, though not water-logged, position will no doubt suit it best.—H. P.

## PLANTS FOR A BACKGROUND.

IN old-fashioned gardens where the planting is carried out as far as possible on natural lines I always think suitable backgrounds play a most important part. Doubtless in the majority of gardens many beds are so situated that there is nothing in the way of tree or shrub life near them, but if they can be placed in positions where this is available, the effect of many flowers is considerably enhanced. This is very noticeable in the case of walls forming a background to borders and that are comparatively bare of foliage. Until the clothing process is completed, one may tax his ingenuity to plant such borders effectively, but the task is easy when the wall is clothed from top to bottom with a mass of greenery. Such a wall and border about 100 yards long are close at hand, the one covered with Wistaria and the other nearly furnished with perennials of various heights. Any available spaces I always fill in with Cactus Dahlias, Cannas, annual miniature Sunflowers, and the like, with the full assurance that they will show to advantage against the leafy background. Another old wall against which were planted in bygone days many things scarcely *bona fide* wall plants, as the Judas Tree, the variegated Buckthorn, *Escallonia macrantha*, the single and double forms of *Deutzia crenata*, and others have served as a background to a small Rose garden, big old stuff of the vigorous pillar varieties being planted comparatively close up, and the different sections worked down to a group of Polyanthas immediately in front. It was not, however, a background of wall, whether clothed or otherwise, that occurred to my mind when starting these notes, but rather the utilisation, more or less, in the open of tree and shrub life as a finish to the groups of flowering plants, and the idea may be illustrated by quoting a few examples. A bed of scarlet Cannas, well grown both in the matter of flower and foliage, may look very well right out in the open, but certainly not so well as when placed in some cosy nook backed and flanked by some light-foliaged tree or shrub. Doubtless many readers of THE GARDEN may remember the interesting notes on flower garden topics penned by the late Mr. Wildsmith and his enthusiasm over his hedge of Lawson's Cypress, with Cactus Dahlias growing in front of and practically amongst it. I thought of this the other day when noting a planting of Fire King and Panthea Dahlias partly between and partly in front of a considerable number of cut-back stuff of *Ailantus glandulosa*, the latter one of the very best hardy foliaged plants we have. Take again the case of the tree-like shrub *Prunus Pissardi*; how admirably *Galtonia candicans*, the Sweet Tobacco and big plants of the white *Marguerite* show against its bright-coloured foliage, but I think even a better combination is furnished by the *Prunus* in the background faced by *Purity Starwort*, and the latter in its turn by the large-flowered form of *Amellus*. Some of the perennial Sunflowers also show well against this shrub, notably *Helenium nudiflorum*. Very few gardens possess occasional plants of *Magnolia macrophylla*. I think, however, this big-leaved tree might be planted with advantage given a sheltered nook, because where it does well it is absolutely unique as a background for tall-flowering plants combining hardiness with tropical foliage. Where flowering or fine-leaved shrubs exist at the back of borders, the planting in front of them should always be carried out with the view to secure

effective and pleasing contrasts, and this, fortunately, can be done well with the aid of hardy things without troubling with plants that have to be renewed annually. Instances of this are to be found in clumps of the large-flowered *Syringa* faced with *Delphiniums*, and later the double *Deutzia crenata* and some of the earlier *Phloxes*. As a matter of fact, however, all deciduous shrubs that are left practically free and not annually mutilated with a pair of shears act, quite apart from their flowers, as admirable backgrounds to the taller perennials, especially if the latter are so planted that the flower-stems or heads, as the case may be, show up naturally amongst the foliage of the shrubs. In the case of a background of conifers, especially if the latter are of stiff, formal habit, the selection of flowers to face them is not so easy; preference should be given to those of irregular habit, such, for instance, as *Delphiniums* or *Anchusa italica*, as opposed to dense heads that keep about the same level. The same principle applies to all hardy plant borders that are of sufficient width to allow of the planting of some three or four species across the same. The relief of a

deep line of the *Lobelias* to the 'white-leaved' *Veronica*. The flower of the latter plant, by the way, affords as pleasing a contrast to its foliage as is furnished by *Carnations* of the crimson *Clove*, *Mephisto* and *Uriah Pike* types. E. B. C.

AUTUMN CROCUSES.

IN too many gardens the *Crocus* is only known as a flower of spring; not as one which will also light up the garden when other dwarf flowers are few and far between, and taller plants dreary-looking and forlorn. This should not

autumn-flowering *Croci* from those which bloom in winter. They merge almost imperceptibly into each other, but only those are named here which usually bloom from August until the beginning of December, when what, for convenience' sake, are called the winter-flowering species come into flower. Even in these late days, though little sun appears to persuade the flowers to open, the coloured cones are pleasing.

Of the various species and varieties of these *Croci* as now offered for sale, there are four species which no one should be without. Others ought to be added, but *C. iridiflorus* of Maw (byzantinus of Baker), *C. pulchellus*, *C. speciosus*, and *C. zonatus* should not be omitted when purchasing. I have named them alphabetically; each is so beautiful that it seems invidious to arrange them any other way. They have also the merit (to some it will appear a fault) of being moderate in price, the first being slightly more expensive than the others.

*CROCUS IRIDIFLORUS*.—This name, for what appears good reasons, was given by Mr. George Maw, who follows Heuffel, although Mr. Baker prefers the prior name of *byzantinus*, used by Parkinson, in accordance with the practice of the present day. The appearance of the flower is so like that of the *Iris* that one cannot but regret that the name of *iridiflorus* has not been adopted, especially as that of *byzantinus*, Mr. Maw says, implies an error as to its geographical distribution, its habitats being the Banat and Transylvania. The outer segments are a clear rich purple, the inner being much smaller and pale lilac in colour. The stigmata are purple and longer than the orange-coloured anther, the filament being lilac. The flower of this species is very large, and a clump presents a very beautiful appearance when in flower in September and October. I observe a variety, offered as major, in some catalogues. I have not seen this, but it is said to be much larger than the type; if so, it must be fine indeed. The next of the four is

*C. PULCHELLUS*, which is an exquisite little *Crocus* differing entirely in appearance from the foregoing and charming us more by its refinement than its brilliancy. This was sent to me from the Bithynian Olympus, where it is abundant. The corms from that mountain produced flowers varying considerably in colour, size, and form. The typical colour of the flower is described as bright bluish lilac, with the outside of the outer segments self-coloured, the inner segments being marked with five narrow dark purple lines. There is also a white variety. The flowers here, as already said, vary much, ranging from almost white to the bluish lilac, which is the typical colour. *C. pulchellus* flowers very freely here from September onward, and is increasing quickly by young corms and by seeds, which are very freely produced. Besides occurring on Mount Olympus, it is said to be plentiful in the thickets bordering the Bosphorus. The third species—

*C. SPECIOSUS*—is, perhaps, the best known of the four. This *Crocus* is very distinct in appearance from the foregoing, and from its colouring and the size of its flowers is remarkably effective when grown in quantity. It is very moderate in price, and may thus be planted in considerable numbers. It is also an early bloomer, flowering with me generally early in September, but very rarely in the end of August. The flowers, which are large and open widely to the sun, are of a colour variously described as bluish violet, bluish purple and bright lilac. Possibly the second most nearly approaches the shade. The segments are prettily marked with dark purple veins. These, with the bright orange anthers and stigmata, add much to the effect and beauty of the flowers. It is widely spread in a wild state, occurring in North Persia, Georgia, the Caucasus, the Crimea, Hungary and Transylvania. Although the best known, and said by Mr. George Maw to be a common garden plant, there are thousands of gardens where it is unknown, and where it would be a cherished flower planted in the grass, the



Autumn Crocuses.

heavy group by one of light, graceful habit adds greatly to the effectiveness of the whole, and should be quite as much a matter for consideration at planting time as the judicious arrangement of different colours. In this latter matter what wonderful contrasts can be managed with *bona fide* hardy plants, quite as good, I fancy, if this be the special aim as were ever brought about by the most lavish use of tender subjects. I have noted, for instance, within the last few days Soapdragons of various heights in an endless variety of shades, from almost a pure white to an intense maroon; tufted Pansies very similar, Pentstemons running rather more on the one shade, but still very varied, and fine-foliaged plants so far as the present time is concerned, from the

be, for, given a warm and sunny spot, the autumn-flowering species will give the greatest pleasure. It is true we have not a satisfactory yellow-flowered *Crocus* for autumn, but we have blues, lilacs, purples and whites, with zones, stripes, and pencillings of various kinds to add to their beauty. More refined in every way than the *Colchicums* or *Meadow Saffrons*, so often called "Autumn Crocuses," they have charms and graces to please the most fastidious and exacting admirer of garden flowers. It is difficult to draw a line which will separate the

borders, or the rock garden. The newer *C. speciosus* Aitchisoni is an exceedingly fine variety, eclipsing in size the type. Generally speaking, there does not seem to be much variation in *C. speciosus*, but from seeds purchased I observe a tendency to variety of shade of colour. It produces seeds very seldom here. Of the last of the four—

*C. ZONATUS*—it is hardly possible to speak too highly. It is an exquisite little *Crocus*, with rosy lilac flowers, with an orange-scarlet base. It flowers early—from the middle of September in good positions—and is so cheap now that it ought to be freely planted. It comes from Cilicia, where it was discovered in 1855. This beautiful little member of the genus requires little or no care, and will give much pleasure to its owner from year to year.

A desire to speak at greater length of four fine *Crocuses* such as these must necessarily reduce the space available for the numerous species not yet mentioned. Among the white autumn *Croci* we have *Boryi*; *cancellatus*, which has a purple base, and of which there are several varieties, including some with lilac flowers; *hadriaticus*, with its variety *chrysolobonius*, which has a yellow throat; and *ochroleucus*, a creamy white flower with orange base. I find that *hadriaticus* is the most satisfactory of these here, *ochroleucus* being a little late and needing a sheltered place.

*C. ASTURICUS*, of which there are some good varieties, varying from purple to lilac, is also a good *Crocus*, but I prefer the equally moderately-priced

*C. LONGIFLORUS*, a pretty, free-blooming species from South Italy, with soft rose-lilac flowers.

*C. CLUSI* is a good *Crocus* with comparatively large flowers and quite hardy here, although it increases rather slowly with me. The rare

*C. VALLICOLA* is difficult to establish and is rather disappointing. It is thin in the segments, and the flowers are neither pure white nor a good cream colour. It has the reputation of being among the earliest to flower, but I do not find this the case. A coveted species is

*C. SCHAROJANI*, which, did it thrive, would give us the yellow species we desire among the autumnal *Crocuses*. I have had this, or what passed for it, but it was among the few failures I have had among these flowers. Coming from an altitude of 7000 feet, it should grow with us in Great Britain, but one must wait for fresh importations, as, so far as I know, it is not now in the market.

*C. NUDIFLORUS* is a fairly well-known species in some districts, and is said to be naturalised near Nottingham. It has bluish purple flowers.

*C. SALZMANNI* is a cheap *Crocus*, also with lilac flowers and dark-coloured feathering.

*C. MEDIUS* is purple-lilac, and  
*C. TOURNEFORTI* has delicately tinted rose-lilac flowers. The old Saffron *Crocus*—

*C. SATIVUS*—is fastidious in its ways, and in many gardens—this among the number—refuses to bloom after the first year. Possibly lifting annually and drying off might remedy this, but with so many other good *Crocuses* it is hardly worth while to trouble doing this. Its variety *C. s. Pallasi*, with lilac flowers, flowers annually here, but *C. s. Elwesi*, which has been in my garden for some years, never blooms. The variety *Hausknechti* is said to be free-flowering, but it has not been tried here.

There are a few other species named in Mr. George Maw's great monograph which I have not yet grown, but enough has been already said to show to some extent the variety at command. It now only remains to say a few words as to their

#### CULTIVATION.

Their great requirements in our climate are sun, shelter and a rather light soil. The two first are of primary importance for flowers coming when sunlight is becoming scarce and

when the winds of autumn are playing havoc with the flowers. Sheltered sunny places on the grass, cosy corners in the rock garden, or borders sheltered from high winds will suit them well. If the grower care to be at the trouble, he will find that a bell-glass or sheet of glass overhead some choice *Crocus* will give him the enjoyment he seeks oftentimes when without it the flower would remain closed. Plant with the crown of the corn about 2 inches deep. Another golden rule is to plant as early as the corns can be obtained. If flowers are wanted this year, this must be attended to, and by doing so there is more probability of success in the future as well. With a few clumps of such flowers as these showing among the grass or through some mossy Saxifrage or other surface-rooting plant, the shortening days need be no longer unrelieved by the brightness of dwarfier flowers than the *Asters* and their few companions of tall growth, which form the sole interest of many gardens at these times. S. ARNOTT.

*Carsethorn, by Dumfries, N.B.*

*Coreopsis grandiflora superba*.—For the flower garden this is certainly one of the neatest and most elegant of hardy plants now in bloom. The plant is worth more than passing notice, for it is rare that we find such profuse flowering in combination with so acceptable a colour. Its remarkable freedom of flowering renders it specially suitable for large beds, and well grown in such its blossoms—a beautiful shade of clear yellow—may any day be counted by the hundred. In this way a profusion of its handsome blossoms is kept up for weeks together. For vase decoration the thin, wiry stems are excellent in every way, and little wonder the plant finds such favour with the florist generally.

*Omphalodes Luciliae*.—Where this plant thrives it is one of the most exquisite of all alpine, yet one always more or less difficult to keep, and still more difficult to increase to any extent. Slugs are particularly fond of its leaves, and will quickly clear off every vestige of growth. In no garden of my acquaintance has this plant proved such a complete success as it did in that of the late Mr. Jas. Atkins, of Painswick, for here the plant not only grew freely, but it also rambled about, quite a large piece being practically clothed with the plant. No very special means were employed to bring about so very desirable a result, which was more due to local influences than anything else. Evidently the high and dry position of this garden suited the plant. Usually under cultivation the plant will succeed in a mixture of peat and loam, with an addition of finely broken brick and some sand. In the rock garden a deep crevice filled with this soil would also suit it. Where the plant exists a few seeds may be saved each year, and though the seedlings present some variation of foliage, the greyish tint at times being absent, the flowers are much the same. The plant should never be disturbed in autumn or winter, but in April or May for careful division.—J.

*Geranium sanguineum album*.—If the plant mentioned by Mr. Archer-Hind on page 6, and by "T. J. W." on p. 31, is the same as that in my garden, it originated on the Kirkcudbrightshire coast of the Solway. It was found among the typical *G. sanguineum* by Mr. W. D. Robinson-Douglas, of Orchardton, from whom I had it. From the remarks of "T. J. W.," I think it is the same as his plant. There are many thousands of *G. sanguineum* along the coast of this part of the Solway, but I have never seen any variation among them. The latter correspondent has raised an interesting question by saying that, from the difference between this plant and the type, he is inclined to think it is hardly a variation only. The points of difference of which he speaks are very apparent, and it differs as much except in lightness of colour from *G. s. lancastriense*, the Walney Island plant, which more nearly resembles

the type than *G. s. album* does. *G. pratense* is abundant on the Solway coast and occurs within a short distance of where *G. s. album* was found—between the rivers Urr and Dee. Is it possible that it may be a hybrid between it and *G. sanguineum*? Through an error in the delivery of the issue of July 3, I did not see Mr. Archer-Hind's note until that of "T. J. W." was read. If either of your correspondents would like to compare plants I shall be pleased to send them specimens.—S. ARNOTT, *Carsethorn, by Dumfries, N.B.*

*Alstroemeria aurantiaca*.—The various species of this genus are among the most useful flowers for cutting at the present time, and among them the above is a most popular kind. The variously coloured heads of bloom are produced on long stems that render them valuable for the decoration of large vases, and where large beds exist in the garden the flowering sprays are most freely produced. Planted 6 inches deep in good soil the plants are safe for years. Where variety is needed, the forms of *A. chilensis* or *A. psittacina* may be added, selecting a more sheltered position for the former and planting deeper to keep secure from frost.

*Sweet Pea Brilliant*.—This is a new American Sweet Pea, said to be a bright scarlet variety of improved form. The colour is really bright crimson-scarlet. The other day I was looking through a large and representative collection of Sweet Peas, including most of the new varieties. I gathered first a spray of Brilliant, then one of ignea, one of Cardinal, which is described as a brilliant crimson-scarlet, one of Firefly, glowing crimson-scarlet, and lastly, one of Invincible Carmine. The likeness between the five was remarkable. I thought Cardinal the best of the five, having the deepest, yet brightest colour. Here then is an illustration of the sameness in Sweet Peas of which many complain. Mr. Henry Eckford has given us many varieties and is still producing others. Now not a few American-raised sorts are being sent into the English market, and the fear is lest we get the English varieties first in the field over again. I have just counted eighty-four so-called varieties in one catalogue, and it seems incredible to think these are all distinct from each other. I have enumerated five crimson-coloured varieties in which sameness of character is unmistakably displayed. We have at least five white varieties, including the old white. So many are scarcely wanted, but they appear in lists, and each is stated to be very true. In ten years time we may have another eighty varieties at the rate they are coming over from America. A thorough trial and selection are becoming absolutely necessary. The question is, who will undertake it?—R. D.

#### TRANSPLANTING DAFFODILS.

I HAVE so frequently seen the annual lifting of Daffodils recommended in THE GARDEN and elsewhere, that I am tempted to ask what advantages are in a general way to be derived therefrom. I know that in trade establishments annual lifting is absolutely necessary, and it may be that in the case of some delicate kinds where the soil is heavy and the average rainfall high the ripening of the bulbs may to a certain extent be perfected by lifting them and laying them out in a dry, warm place for a month or so, but in soil of a fairly light character, where moisture rapidly drains away and which in late summer frequently becomes dust-dry to a depth of several inches, I fail to see in what way annual lifting can be beneficial. My own experience is against the frequent transplanting of *Narcissi*. I never by any chance obtain flowers of such good quality from bulbs that have been moved as from those that have been two or three years undisturbed. It may be urged that when the bulbs are lifted after blooming they are apt to remain rather too long out of the soil, and I am free to own that it does frequently happen that replanting is

deferred until autumn is fairly advanced. When the bulbs are not set out until October, it is easy to understand that roots are not so abundant as is the case with undisturbed bulbs. Narcissi commence to push out roots quite early in September, so that if out of the soil for some weeks after that time, there must be some loss of strength. It does, however, seem strange that this should be the case when it is a question of removal only. One would think that there could be absolutely no diminution in the blooming powers of bulbs that are simply transferred from one place to another. According to my experience, however, this is exactly just what does happen. Last autumn, for instance, I removed some established clumps of Horsfieldi, Emperor, and others. The bulbs were just beginning to show roots, and they were very carefully lifted and replanted at once. Some few bulbs were overlooked, and the difference in the quality of the blooms they produced was very striking. On the transplanted bulbs the flower-stems were much shorter, and the flowers one-sixth less in size.

In a general way I am convinced that nothing is gained by frequent transplanting, and that the best results are gained by planting the bulbs some 8 inches apart and allowing them to remain several years undisturbed. I grow such kinds as Horsfieldi, Emperor, cernuus, obvallaris, Empress, and Sir Watkin for cut bloom, and my plan has been to set the bulbs out at the above-mentioned distance in 4-foot beds, allowing them to remain about five years, and my best results are obtained after the second year from planting. Sir Watkin this spring was very fine, better than I ever had it, and the bulbs were planted four years ago. All my experience of Daffodil culture has been gained on the light Surrey loamy soil, and it may be that in the case of soil of an opposite character frequent transplanting may be beneficial, or, indeed, in the case of some kinds rarely necessary. This is a matter that every grower of these bulbous flowers can easily determine for himself, as in the course of a couple of seasons a definite result might be arrived at. Five years ago one single bulb of poeticus ornatus happened to be planted in a small border where miscellaneous things are grown. The bulb was a good one, as good in appearance as any that come from leading growers of this family. It produced a flower such as is generally brought into Covent Garden, and made a good growth. It has, however, been very interesting to note the sure, but gradual increase of this bulb. It has formed a clump that this spring bore twenty flowers. It is not only that the number of bulbs has increased, but there has been a yearly corresponding increase in vigour. This season the flower-stems were 2½ feet high, with blooms of finer quality than I ever saw on newly-purchased bulbs—finer, indeed, than I ever saw before of this Narciss. Had I planted an equal number of the best quality bulbs last autumn, I am confident that I should not have had a similar result. I never fully realised what a grand thing princeps is until I saw it in the form of established clumps at Oakwood. The flowers were one-third larger than those produced by bulbs which I obtained from a reliable source, and that were planted the previous autumn. The latter have remained undisturbed for three years, and are gradually taking on the character that distinguishes this Daffodil in its highest state of development. In the face of such facts, one may doubt the wisdom of the annual lifting that is practised by those who grow in quantity for cut bloom. The expense

of lifting and replanting an acre of Daffodils is considerable, and the advantage derived therefrom appears to me to be very doubtful. After all, the frequent disturbance is unnatural in the case of such a perfectly hardy bulbous flower. The common Lent Lily in meadow and copse and the old double naturalised in grass and woodland are object lessons which ought to guide us in this matter.

*Byfleet.*

#### CARNATIONS AT CHELSEA.

BORDER Carnations are at the present time an interesting feature in Messrs. James Veitch and Sons' nursery in the King's Road, Chelsea. They are interesting because of the number of varieties grown, and they are instructive because of the fact that visitors will see them in large numbers in the open beds and in such a way that their relative value may be determined at a glance. And it will be no disparagement in the least to state that what under many and various adverse conditions in the open is well grown by the Messrs. Veitch at Chelsea, may, under improved surroundings and purer air, be much better grown in many parts of the country. Something like a foot deep of fresh soil has been added to the beds during the past winter, the old soil not having been changed for several years. Unfortunately the fresh soil contained wireworm in sufficient quantity to make one or two small gaps in what otherwise would have been a most complete series of beds, replete with an assortment of all that is good in one of the most valued groups of hardy florists' flowers. Only a very few of the leading flowers are now at their best and still fewer in the very earliest varieties that show any sign of passing, but even of these there is yet quite a store of lateral buds that will carry on the display for a couple or three weeks longer in some instances at least.

The entire batch is growing in a series of oblong beds, each kind represented by a large block. In this way a good idea may be formed of their true worth in the garden. We will for the present direct attention to the more worthy, taking the newer kinds first. Of these, Sea Gull and Her Grace are two of the most lovely of blush-tinted flowers, both large and sufficiently full to recommend themselves to all, delicate in their beautiful shade, and both singularly free and good in habit. Exile and Miss Maud Sullivan, again, are selfs of rose and rose-scarlet hue, the former remarkable in its perfect form and fine petal, indeed a grand Carnation in every respect, while the latter is wonderfully free and pleasing. Another fine form is Winifred, this being especially noteworthy for its free, compact form and dwarf as well as perfect habit. The clear apricot-coloured flowers are faultless. W. J. Fish and Sweet Briar are scarlets of differing shades, the former intense in its brilliancy; while Princess Charles of Denmark, as a white for the open border, has much to commend it to general use in its fine form and good habit. Ellen Terry and Mrs. Eric Hambro are fine whites, the former very large, the latter perfection in its glistening purity and form of petal, though not so full as some and worthy of a stouter footstalk. Foremost among the yellow kinds are Britannia, Primrose Day, Mrs. Patrick Campbell and Miss Audrey Campbell—a set very difficult to equal from an all-round standpoint. Equally important is it that any grower may with advantage embrace the whole of these, and the well-known Germania also, without any fear of overdoing this particular shade, as they give a good succession naturally, besides possessing a pleasing variety of colour. One or two yellow-ground kinds were very fine; these are Eldorado and Golden Eagle. The former is distinctly marked with bright rosy red; the latter, deeper in its golden yellow shade in the centre, is also prettily marked red. Both are perfection in size, fulness of flowers and form. Nereus is another of these, a very handsome flower, margined with deep rose; while Mr. Nigel, the earliest blossoms of which were only then expanding, is perhaps

the handsomest of all this race. This last, by the way, possesses more of the true character of the yellow-ground type, while its heavy edge of crimson is very pronounced, and a flower which all must admire. Hayes' Scarlet is a grand self Carnation, most decided in its brilliant hue of colour, and a good doer. King Arthur, also a scarlet, is perhaps the largest flower of this shade among true border kinds. Flowers 5 inches across have been taken from plants grown in the Chelsea nursery, and in this respect quite equal to those of the Malmaison type and worthy of pot culture. Before taking leave of the best of recent introductions, special mention must be made of Mephisto, a dark crimson self. This is not only a highly finished flower, but its pronounced erect habit in the buds, as in the expanded flowers, will render it valuable for the flower garden. More than this, it should make one of two parents possessing this very desirable character, viz., a footstalk sufficiently strong to hold the best flowers well up. At the present time many kinds have such weakly stems and peduncles to the blossoms that at flowering time, unless tied to near the bud, they droop in the most helpless fashion; and now that the flowers themselves have attained to such perfection the florist may do worse than devote attention to this particular defect in many kinds.

In the general collection we noted many fine sorts, which for convenience here we will refer to in their shades of colour. In scarlet, Joe Willet, Cantab, with strong clove scent, and Napoleon III. strike one as very good, the two first especially good and free in growth also, while the latter is a very neat and compact kind. Among the rose and rose-pink self varieties Eudoxia is very fine and most desirable, while Celia, Lothair, Rose Celestial, Ketton Rose, and Duchess of York appeal to one as the indispensables of this set. It is worthy of note, too, how specially beautiful these kinds are when protected in a shady, cold house, a course of treatment which appears to bring refinement of a very charming type. For this same reason these self-colours of this shade should not be planted in fully exposed places; when in rather reverse positions their beauty is much longer retained. Of pure whites, Mrs. Frank Watts and Snowdon are very fine, the former free and dwarf also, while the latter is very desirable in size as in other qualities. To the crimson already mentioned, and apart from others too well known to be repeated, Uncle Tom must be added for its size, freedom, and good petal. In yellow and buff, Duc d'Orleans, with Florence and Coruna, are all worthy sorts, while The Dey, Mrs. Seymour-Banocrie, Elsie, and George Cruickshank are conspicuous among such as are included in the fancy varieties.

These, then, are a few of the most noticeable at the time of our visit; others as good are appearing daily, and beyond these a beautiful array may be seen in perfection in pots in one of the adjacent houses, where with only ordinary care in quite small pots they give abundantly, and in the best of health, of their varied, beautiful, and in many instances delightfully fragrant flowers.

**Begonia Worthiana.**—The aim of the cultivator in the raising of new Begonias has been principally directed towards the production of large round flowers, which hold themselves in a partially erect manner, and are thus seen to the best advantage. Under glass no exception can be taken to this section, but when employed in the flower garden the large blooms are easily injured by wind and rain, whereas the smaller and drooping blossoms will not suffer in the least. For this reason *B. Worthiana* is popular as a bedding variety, for the flowers, though numerous, are not large, and stand the weather well. They are of an orange scarlet colour; indeed, it is a type of *Begonia* of which we had many forms twenty years or more ago, but now-a-days they are rarely seen.—H.P.

**Lathyrus rotundifolius.**—In a recent issue of THE GARDEN this is stated to be the earliest

blooming of the Everlasting Peas. The writer, however, is not quite correct, for *L. Sibthorpi* precedes it by about three weeks. This latter is not often seen in good condition, being of slower growth and taking some years to grow into a good-sized specimen. My plant is about seven years old and is only just beginning to be effective. It apparently likes a rather light, well-drained soil, with plenty of food in the form of an annual top-dressing of good manure applied in the winter months. As an early-blooming Pea this is worth a place where a succession of hardy flowers is required all the season through, but it is certainly inferior from a decorative point of view to its near relative *latifolius*, which if not of easy culture would probably be held in much higher estimation by hardy flower growers generally. It would be difficult to find anything finer than the masses of this Pea that one sees in cottage gardens.—J. C. B.

#### THE CALOCHORTI.

THE various species of *Calochortus* have been coming into flower since early June, and now, at the end of the month, are in their best form. These native plants seem to be much neglected, though they are among the most distinctly and beautifully flowered of bulbs. It is probable that many who have ventured to grow them have been disappointed in results, for the cultural directions of catalogues are usually hazy or else incorrect. They also often recommend cultivation in frames, or other conditions which deter most growers from attempting their cultivation. My experience with all the species is that they are neither tender nor at all difficult to flower in this latitude in an ordinary garden border. I have tested them for several years and sacrificed my first collection to satisfy myself as to whether they would or would not survive. One should hesitate in offering any hard and fast rule for the cultivation of plants, for they can often be grown under widely differing conditions. *Calochorti* grow naturally in regions rainless in summer, and where dormant plants waken into growth in the fall under the influence of moisture, but not necessarily of a high temperature. They are hardy here without protection, but must be classed with those bulbous plants whose foliage will not always endure the rigours of our winters. The successful growth of such bulbs requires that, after being thoroughly ripened in the early summer, they shall be kept perfectly dormant so late in the year that no foliage can appear above ground until early in the ensuing spring. The simplest and safest procedure is to lift the bulbs after the ripening foliage indicates rest and store them in dry earth in a warm dry place, planting out when the ground has lost its warmth, which in New Jersey is in November. Under such treatment they grow and flower well here, even in soil too hard to work in dry weather, and with no other attention than that already suggested. Of course, one does not plant bulbs in manured soil or in soil rich in humus, which will hold water and ferment to their injury. In the state of nature many bulbs seek the depths evidently to escape detrimental surface humus. *Calochortus* bulbs, if left in the ground here, may or may not survive the summer if the soil is not too wet, but the safe practice is to lift them.

There are more than a score of species. From a garden point of view they may be divided into two sections—the Star Tulips and the Mariposa, or Butterfly Tulips. The former are free-growing plants, many-stemmed, and bear a profusion of small flowers, with petals closed into irregular globes. *Calochortus pulchellus* (yellow), *C. albus* and the red form, *C. amoenus*, are the best trio. The Butterfly Tulips are entirely different in habit and form, and find their most distinct expression in the white and roseate flowered kinds, as these are spotted and lined with the butterfly markings, from which they receive the popular name. The markings are quaintly beautiful in dull reds, browns, yellows and green, sometimes in eye-like forms, at others in a few bold lines sketched, as it

were, on some part of the broad petals, mostly on the base, but sometimes in the centre. Markings of similar character are also found on the very narrow green sepals. The flowers are three-petaled, and about 3 inches in diameter, borne about 12 inches high on thin stems. The foliage is narrow and scanty. A good selection of these would be *C. venustus enlatus*, *C. pictus*, *C. venustus roseus* and *C. Eldorado* (rose).

Of the yellow self-flowered kinds, perhaps the best is *Calochortus luteus* var. *concolor*, a deep golden flower and a vigorous species. There are also many purple forms, mostly self-coloured or slightly shaded, which do not appeal to me as favourably as the others, though there are spotted kinds. The best is probably *C. splendens*, a lilac-coloured form, which has finely-dentated petals, and the base of the cup filled with hair-like growths. Many of the *Calochorti* have these growths, but none, I think, in such profusion. Probably the specific name of this species refers rather to some one's botanical enthusiasm than the gratification of his colour sense. *C. Catalinae* is a distinct kind, the white petals being flushed with purple on the outside. *Calochorti* seem to be attractive to a number of different insects, and they bear seeds freely. *C. Plummera* seems to be a late-flowering species.—J. N. GERARD, in *Garden and Forest*.

**Dahlias.**—These now require frequent attention, the extra dry atmosphere which has prevailed of late being against them. Mulching thickly with well-decomposed manure and giving occasional copious waterings must likewise be practised if robust plants and normal well-coloured blooms are expected. Earwigs must now be watched for; although there are as yet no flower-buds of any importance to injure, the pests feed on the foliage and may soon cripple the plants. Some growers use small flower-pots elevated on a stout stick, a small quantity of hay or Moss being put into each pot and these examined daily. I have, however, killed most by placing in the plants 9-inch lengths of Broad Bean stalks, tapping these every morning on the edge of a pail containing boiling water to destroy them.—C. C. H.

**Gladioli.**—Gladioli will now be making rapid growth, and, provided they get sufficient moisture at the roots, they enjoy a maximum amount of sunshine. Gladioli always pay for an addition of sweet, fresh loamy soil and leaf-mould to the bed or border when planted out in spring, and this can best be done by drawing drills, planting the bulbs, and afterwards filling in with the new compost. Mulching is very beneficial—in fact, imperative—where the plants occupy a warm, sunny position, which they always should do, and, being planted in rows, staking, as a safeguard against rough winds, is best done by fixing a stout stake at each end of the row where they are short ones, and carrying a horizontal rod across from one to the other, afterwards tying each plant to it. Liquid manure the colour of pale ale improves both the size and colour of the spikes, and, where required to remain in good condition for as long a period as possible, a temporary shade may well be erected over them. For church and, indeed, general decoration nothing beats *G. breuchleyensis*.—J. C.

**Coreopsis lanceolata.**—For cutting I know of nothing more useful than this during the early summer months, its long and slender stems making it suitable alike for large or small vases. As a biennial it is very fine and easily raised from seed. In good soil it grows quite 2 feet in height. In a mass it has a very bright and telling effect, and supplies material for house decoration in almost unlimited quantity. The blooms, too, last well in water, which cannot be said of many better-known and more popular flowers. Arranged with light foliage, such as *Asparagus*, or kept alone, the flowers are very pleasing, because so very light and brightly coloured. My plants were raised last year in May, temporarily transplanted when large enough, and finally

planted in the autumn. They bear removal well in the autumn or winter, as they make large balls of fibrous roots.—W. S., *Wills*.

#### SHORT NOTES.—FLOWER.

**Tufted Pansy Pencaitland** is essentially a plant for garden decoration. It seems to succeed better during cooler weather. The flowers are of medium size, pure white, with a slight suffusion of yellow on the lower petal. It is of free and dwarf habit and flowers very freely.—H. N.

**Tufted Pansy Mrs. C. F. Gordon.**—This may be described as an improved Countess of Kintore, and for its dwarf, compact form of growth should be more often used. The flowers are large, circular, of neat form, and borne on long foot-stalks. The colour may be described as bluish purple, shading to pale lavender on the outer edge. The habit of growth, too, is very good.—C.

**Tufted Pansy Devonshire Cream.**—Of the later introductions, this variety is deserving of special notice. In my own garden a few plants are flowering very freely. The flower is of good size, rich cream, with an orange centre, and rayless. It is of a dwarf, compact habit. A few thousand plants of this variety massed together in a large bed will long be remembered.—C. A. H.

**Verbascum phœniceum and varieties.**—These are very beautiful at the present time in the wild garden growing amongst the grass and in mixed beds. The plants are self-sown. The slender spikes in masses waving amongst the somewhat long grass produce a charming effect. One of their great recommendations is they are not particular as to soil. I have some plants growing on a thin stony soil.—DORSET.

**Tufted Pansy Endymion.**—This is a very striking new variety, colour light yellow and the bloom of remarkable substance. In size it surpasses any sort known. It will, therefore, be invaluable to exhibitors. The habit, again, is excellent and the growth free; it will consequently be not less useful for bedding. A large bed of this variety at the nursery of Mr. Baxter, Woking, now forms a mass of colour most distinct and beautiful.—S.

### GARDEN FLORA.

#### PLATE 1128.

##### ROSE AUGUSTINE GUINOISSEAU.

(WITH A COLOURED PLATE.\*)

GENERALLY speaking, Roses were never more lovely than they have been this year, and the garden varieties have seldom been seen in greater perfection. The above Rose is a sport from *La France*. I readily admit that it lacks the fulness of its parent, but with this exception and in its colour it is in every way equal to *La France*; indeed, in my opinion it excels that variety in effectiveness. It is a Rose that requires liberal treatment, such as weak doses of liquid manure and a sprinkling of good guano now and then.

Although it is a fine variety to grow as a standard, the best effect is produced when a dozen to a hundred plants are massed together on the grass. It is rather a misnomer to term this Rose the *White La France*, for in reality its flowers are of the delicate pink shade seen in sea Anemones. However, viewed from a distance, a mass of this Rose has the same effect as if it were pure white. I think it is even more deliciously fragrant than *La France*—if that were possible. It grows freely upon its own roots. Now that the budding season is upon us it would be interesting to bud two or more of the *La France* tribe upon one standard stock. For instance, *Augustine Guinoisseau* and *Belle Siebrecht* would harmonise well together, or the former and *La France* or *Caroline Testout* would make another good combination. One

\* Drawn for THE GARDEN by H. G. Moon at Gravelye Manor, Sussex. Lithographed and printed by J. L. Goffart.



THE ROSE



could readily gather from remarks overheard at the Crystal Palace show recently that these delightful garden Roses are becoming increasingly popular. Surely nothing can surpass in beauty masses or hedges of the Rose under notice and others of the same tribe already mentioned, and in addition I might mention others such as Marquise Litta, Viscountess Folkestone, Grand Duc de Luxembourg, Marquise de Salisbury, Mme. Pernet-Ducher, Enehantress, Clio, Mme. Laurette Messimy, Mme. Lambert, Marie Van Houtte, Hon. Edith Gifford, White Lady, Gloire des Polyantha, and many others.

## PHILOMEL.

## THE WEEK'S WORK.

## KITCHEN GARDEN.

**WINTER TOMATOES.**—The chief reason these do not yield full crops during the early winter months is more often than not owing to not starting the plants soon enough in the summer. Unless strong plants, 3 feet at least in height, are well set with fruit by the end of September, at which time they are taken indoors and placed in their winter quarters, it is hardly worth troubling with them, as they would not repay for the room and attention they require. Sturdy plants should now be ready for placing into fruiting pots. Nothing is gained by overpotting the plants, neither should they have very rich soil, or growth will be too free. Nine-inch pots and only three parts filled with soil will meet the requirements of the plants at first, as they can be top-dressed later on. Pot firmly, as this further tends to promote a sturdy growth. The plants should be stood in a sunny position, but not exposed to wind. A piece of slate should be placed beneath each pot to prevent the roots taking to the ashes or other material on which they are standing, as well as to prevent the ingress of worms. Although the plants are all the better for full exposure to the sun so long as they are copiously supplied with water, it is well to shield the pots from its full force, or many of the roots may suffer. It is easily done if the plants are stood in line about a foot apart by laying a 9-inch board against them, which is better than plunging the pots in ashes. It is better to keep the plants to a single stem, affording a stout stake to each, so that growth can be secured against wind as it develops. If the plants have become rather tall before they are potted, it would be wise to twist the stems round the pots, the object being to induce them to form fruit clusters from base to summit. Although it is considered neither necessary nor desirable to syringe Tomato plants at any time, a slight dewing say twice a week after a very hot day tends to keep the plants healthy without the risk of encouraging disease. Manure water will not be required until the plants are well furnished with fruit and this has commenced to swell.

**SUMMER FRUITERS.**—Of late the weather has been very favourable for these, being both hot and dry, which has assisted the flowers to set freely. Feeding should commence directly a few pounds of fruit are swelling, and the plants should be relieved of these when they are about three parts coloured, especially if they have to be packed and sent any distance. The plants are often allowed to grow at will until a quantity of fruit has formed, when they are suddenly stripped of the main foliage and side shoots so as to expose the fruit to the sun. Apart from this being very rough treatment to the plants there is also a danger of the fruit being scalded by sudden exposure, causing many of the finest to become useless. Let the sun act on the fruit by all means, but avoid stripping the plants suddenly of a quantity of foliage. Most of the plants, whether growing against a wall or trained to stakes in the open, will be all the better for a mulching of some description, which will assist to promote active surface roots and also to swell off the fruit.

**POTATOES.**—All the early ones and many of the second earlies, such as Beauty of Hebron, have ripened up quickly, and it would be advisable to lift and store them in a cool cellar before we get any rain. This, together with the heat that is in the ground, would undoubtedly cause the tubers to start into growth again, which would greatly impair their quality; therefore no time should be lost after the skins have become firm in making sure of them by lifting at once.

**SHALLOTS.**—These, too, have ripened quickly, and in many gardens will be ready for lifting. It is neither necessary nor desirable that the chumps should be broken to pieces and the bulbs singled out, it being better to leave them whole for a week or so until they are thoroughly matured, when they may be divided, sorted, and stored away in a dry, airy place.

**HERBS.**—A good store of dry herbs during the winter is invaluable, and steps should be taken to collect and preserve a quantity of each kind before the season becomes too far advanced, as both Mint and Marjoram will lose substance in their leaves if not cut at once. To dry these properly, they should be made up in small bundles and suspended in a dry, airy shed. When laid in the sun to dry they wither too quickly and there is much waste. RICHARD PARKER.

## FRUIT HOUSES.

**EARLY ORCHARD HOUSE.**—The crops of fruit having been gathered, the trees should be moved outdoors, as advised in a previous calendar. If arranged in one block where they can get full sunshine all day long, with plenty of old hotbed or some other non-conducting material packed amongst the pots and tubs to keep the roots cool, and such matters as syringing and watering strictly attended to, the wood will soon ripen and the trees be ready for re-tubbing or potting shortly. In the meantime, pots, tubs and compost should be prepared. The clearance of this house will enable a rearrangement of the occupants of later houses being made, when the most forward can be grouped by themselves in it and pushed forward if desired. In any case the trees will appreciate an extension of room, especially if at all crowded, while the attendants will be the better able to get about amongst them.

**LATER HOUSES.**—Most, if not all the fruits on the trees will now be taking their last swelling. If necessary to hurry them, advantage should be taken of solar heat to push them forward, and close the house in the afternoon early enough to run the temperature up to 85° or 90°. If time is of no consequence, the ventilators may be kept fully open, when, with due attention to routine matters in the way of watering, with the administering of stimulants in safe quantities, together with ample syringings during fine weather and damping of paths, floors and beds, the fruits will attain their fullest size and eventually ripen to perfection.

**CHERRIES.**—The earliest forced trees in pots and tubs will have been moved outdoors ere this, and must be treated in the same way as recommended for other orchard-house trees with regard to mulching, &c. Permanently planted trees must have all the air it is possible to afford them, and the foliage should receive a daily wash of cold water to check red spider and keep the soil about the roots in a proper state of moisture. Old trees may have the assistance of liquid manure, which will greatly benefit them and cause the fruit to swell up to full size. Later houses, in which ripe fruits of the Bigarrean and Royal Duke section are ripe, must have an abundance of air during the daytime. A thin shading of white-wash on the roof will help to prolong the supply if the crop is wanted to last as long as possible. Stretch netting over the ventilators and doorways to keep out birds, and to prevent the atmosphere of the house becoming too dry, damp the floors about mid-day when the ventilators are fully open. Give clear water to pot trees as often as they require it, but guard against an excess, and maintain an ample mulch not only on the surface of the pots, but on borders also

where the trees are planted out. When the crop is gathered take steps to give the trees a cleansing and treat as above.

**PLUM HOUSE.**—Trees from which the fruit has been gathered should be turned outdoors if in pots, and assisted with liquid manure if in a weak or stunted condition. Permanently planted trees also appreciate the same amount of attention, and will then give all the better account of themselves another season. These trees must now have an abundance of air, and the garden engine or hose should be brought to play on the foliage daily. Less forward trees laden with fruit must be kept well fed and top-dressings and mulchings renewed as often as required. Attend to the pinching in of side growths on the main branches to allow sunlight and air free play, and stop leading shoots on young trees by pinching out the tips if they have reached their limits. Continue syringing the trees until the fruits show signs of ripening, when it must cease, especially if the water of the district contains lime in solution, as this will spot and disfigure them. When syringing has to be discontinued, the floors and beds may be more freely damped on fine days, which will compensate in some measure for the loss of moisture occasioned by the abandonment of syringing. When the Plums ripen, less atmospheric moisture will be required, and when fully ripe the house must be kept cool and dry, giving just enough water at the roots to prevent the fruit from shrivelling and the foliage from flagging. Such varieties as Jefferson's, Golden Drop, and some of the Gages will hang for a long time in good condition, and even if they do shrivel a little it will add to their value, as they are then the more richly flavoured.

**PEARS.**—If all the malformed and surplus fruits have been removed and the trees liberally treated at the roots, the early varieties of Pears will be making great headway. Continue to give them ample root waterings, supplemented with a stimulant of some description, until the fruits show signs of ripening, after which give nothing but clear water. These early Pears may be placed outdoors to ripen if they are not required at any particular date, and this will give the later varieties more space when a rearrangement takes place. If moved outdoors, the pots should either be plunged in a border or have a mulch of half-decayed manure placed round them, or the difficulty may be got over by sinking them in tubs and filling in the intervening space with short manure. I have practised this with excellent results, and prefer it to plunging. Watering, too, must be well looked after, and a daily wash with the syringe each evening will have a wonderful effect in reviving the flagging energies of the trees after hot, scorching days. Trees of later varieties must have every attention, and if still too heavily laden, give them a further thinning. It is better to do this than run the risk of over-cropping them, however much the well-laden branches may tempt the tyro to do so, as the aggregate weight of fruit will far exceed that produced by the trees if left unthinned. To overcrop is a fatal mistake, as not only does it lead to the production of inferior fruit, but the energies of the trees become so overtaxed, that they require a whole season in which to recuperate. It is often necessary with such large-fruited varieties as Doyenné du Comice, Duchesse d'Angoulême, &c., to afford them support when the fruits become heavy, and this is best done by means of stakes, to which the branches should be securely tied. With regard to watering and other such routine matters, Pears require the same treatment as that accorded to Plums. Attend to the pinching back of young growths on established cordons and bushes, also young trees, but in their case merely tip the leading shoots. If aphides take possession of the points of the shoots, as they are sometimes apt to do, dip them in a strong solution of some approved insecticide and well wash with clear water afterwards.

**POT VINES.**—Those intended for early forcing should now be ripening up, and as the canes become brown, more air must be admitted and less atmospheric moisture kept up. Stimulating root-

waterings must, however, be given until they are turned outdoors to finish, and as it is highly necessary to keep the foliage clean and intact, syringing should not be abandoned until they are removed. When ready for removal, stand them at the foot of a hedge or a wall having a south or western aspect, and fasten the canes securely with shreds and nails, or tie them to the hedge, as the case may be. Until the foliage drops, watering must be strictly attended to.

**STRAWBERRIES.**—Where these are forced, the potting of the earliest varieties will now be engaging attention. When once the pots are well filled with roots, the runners should at once be separated from the parent plants and stood for a few days in a shady place and contiguous to the potting shed if possible, after which the sooner they are potted the better. When potted, stand each plant level on a firm, open, gravelled space, or on boards by the sides of walks, and in addition to seeing that they get all the water they require, syringe them daily also in fine weather.

A. W.

## ORCHARD AND FRUIT GARDEN.

### NEW STRAWBERRY BEDS.

**DURING** the next week or so Strawberry growers will be busy layering young runners, both for growing on in pots for forcing and also for forming permanent beds. In a few gardens of extra large dimensions a quarter is annually devoted to young plants for the production of runners alone, all bloom-trusses being removed as soon as they appear, in order to strengthen the runners. Many, however, cannot afford this, and have to be contented with runners from the bearing plot. Some gardeners still adhere to the old-fashioned plan of planting stock plants by the sides of the kitchen garden walks in front of espaliers, and I use all such available space myself for the purpose. I plant biennially, placing small sticks between the old plants previous to chopping them up as a guide, so as to change the ground each year. A few spits of the old border are then taken out, this being replaced with good maiden loam, rammed firmly, and planting in the centre a good strong plant. In this position the pots can be plunged or half plunged with ease, and daily watering and general attention become an easy matter. The great drawback attending runners on bearing beds is the danger of trampling them with the feet, which to some extent the most careful cannot avoid, and if, as they need to be in order to preserve them, they are laid between the plants in the rows before picking or even netting commences, they get unduly shaded by the foliage. Good results, however, follow this system, especially if plenty of space is allowed both between the plants and rows, 2 feet being none too much. Early preparation of the ground is important, as loose, unsettled soil is against the plants in more ways than one. Where digging or trenching immediately precedes planting, extra treading and, in the case of light soils, the use of the garden roller become a necessity. That Strawberries prefer a firm root-run I have had proof over and over again. Mr. Allan, of Gunton, who, as is well known, excels in Strawberry culture, always selected a suitable plot of ground in spring, digging it one spit and the crumbs, and placing the manure in the bottom. On this was sown his main crop of Onions in rows 3 feet apart. The frequent trampling during summer to attend to the crop rendered the ground firm, and here in due time his Strawberries were planted. The plants went away rapidly, did not suffer from drought in a hot autumn, as where the ground was newly turned and comparatively loose, and the growth

was of such a character that with a fair amount of sunshine in September and October maturity was certain. A cube of maiden loam rammed firmly round each ball, watered home, and a slight mulch of leafy material to act as a conservator of moisture, give the plants all the better chance. If growth is normal and the autumn sunny, several waterings with liquid manure may safely be given, but in dull, sunless seasons water pure and simple had better be adhered to. In the majority of seasons and under the best management red spider will appear, but in any case the young plants in pots, both for forcing and planting out, had better be laid on their side as soon as detached from the parent, and vigorously syringed with sulphur water. This will clear them of the pest and ensure a clean and healthy growth, as it often happens that some time elapses between severing the young plants and planting or potting them. The best place in the interval is behind a north wall. Early planting, however, is very important. A change of runners every few years always pays.

J. CRAWFORD.

**Strawberry Empress of India.**—As a mid-season variety I should say this would be hard to beat. It is of medium growth, but very free-bearing, the berries not large, but of a bright, deep scarlet colour and rich flavour. The fruits, being firm, travel well, and grown here alongside most of the newer varieties that have been much advertised and sought after, Empress of India beats them all except for size of fruit.—C.

**Strawberry Latest of All.**—Out of a dozen plants of this variety I have not succeeded in getting a perfect fruit, though they bore freely. All the fruit as soon as they began to show signs of colouring were attacked by a kind of fungus, which caused the flesh to become hard and worthless. I shall be glad to know if this is the general experience of this variety. My plants are growing in a fairly strong loam. Royal Sovereign, growing by the side of it, has done well and given me some excellent fruit.—R. D.

**Melon Knowsley Favourite.**—This Melon, the result of a cross between Knowsley Green and William Tillery, still holds its own among the numerous varieties which have been introduced within recent years. I grew it the first year it was sent out, and the high opinion then formed of it has been confirmed by subsequent trials. This season the fruits have been all one could wish, and so thoroughly have they ripened and so exquisitely flavoured is the deep pale green flesh, that every particle is fit for consumption close up to the rind. The fruits, rather inclined to be oval in shape, prettily netted, and golden yellow in colour, vary in weight from 3 lbs. to 5 lbs. The only drawback in this excellent Melon is the fact of its being a strong grower, which precludes it from being classed as a good kind for growing as a cordon. Where ample room can be afforded the plants they give first-class results in the shape of heavy crops of handsome and deliciously flavoured fruits.—A. W.

**Thinning hardy fruits.**—It is of great advantage to thin Apples and Pears, and to do the thinning before the fruits get too far advanced. My note more concerns late varieties of Apples. These when given more room to develop come much finer, keep better, and have more colour. In the case of certain varieties of dessert kinds the fruits are none too large, and some crop very freely. I have found thinning at this season of great advantage, as by so doing size is obtained and keeping improved. It may be asked why leave the thinning till July when it could have been done a month earlier? The reason is that one cannot be sure of the fruit not dropping till July is well advanced, and in the case of late Apples and Pears there is a period of three months before the fruit is stored. A few varieties of late Pears crop so freely on bush and pyramid trees that they would not be worth storage unless well

thinned. It is surprising the progress the fruits make after they have been thinned.—B. M.

**Strawberry Royal Sovereign.**—I have been disappointed with the above Strawberry this year. I have had an excellent crop of fruit, but the flavour is very poor. It is a splendid Strawberry to look at. I have let several people taste it, but all complain about the flavour. The soil here is very light and naturally poor, from 18 inches to 2 feet of soil resting on the natural rock. The ground was trenched, plenty of manure worked in, and allowed to settle for a fortnight, then well trod before being planted. The plants were well mulched with rotten manure soon after planting, and well mulched again this spring with stable litter. Noble, on the contrary, is very fine in flavour, the best all-round Strawberry to grow. Latest of All was the first to ripen with me this season. On this soil it does very badly, making very little growth, and the foliage is very yellow. I shall not grow it another season. I have tried Auguste Nicaise for the first time this year, and have been very pleased with it; it is a finely flavoured variety. I notice that some of the plants have round fruit, very much like Noble, while others are cockscomb-shaped. Would some reader of THE GARDEN kindly give me the names of two good Strawberries for preserving suitable for light soil?—THOMAS COCKERILL, *The Gatehouse, Wirksworth, Derby.*

### THE ORIGINAL LOGANBERRY BUSH.

The following notes by Judge Logan, of Santa Cruz, California, in Bulletin No. 45 of the Agricultural Experiment Station of the Rhode Island College of Agriculture and Mechanic Arts, will, we hope, prove interesting to our readers, seeing that this new fruit has just been certificated by the fruit committee of the Royal Horticultural Society:—

Prior to 1880, taking great interest in small fruits, particularly the Blackberry and Raspberry, I had tried in my garden every variety of those berries that I could obtain. Among them were the Texas Early, a high bush, *Rubus villosus*, the Aughinbaugh, a pistillate Dewberry, and an old variety of red Raspberry which had been cultivated here for many years, name unknown, but resembling the Red Antwerp. The Texas Early is sometimes called Crandall's Early, because brought to this State by Dr. Crandall, of Auburn. I was not satisfied with any of these fruits as a table berry. The wild *Rubus ursinus*, of which the Aughinbaugh was the best variety obtainable, bore a fruit that was all that could be desired in flavour, but all of the *Rubus ursinus* type are weak growers and poor bearers, so much so that they are unprofitable for general cultivation. The Aughinbaugh being pistillate or uni-sexual, I deemed it possible to grow a cross between it and some other early Blackberry, such as the Texas. I did not then think it possible to cross the *Rubus ursinus* with the Lawton, Kittatinny, or any other *Rubus villosus*, for the reason that the latter flower after the *ursinus*, and repeated trials of such a cross since that time have been failures with me. I had by the merest accident planted the Texas on one side of the Aughinbaugh and the red Raspberry heretofore spoken of on the other. The canes of all three intermingled and flowered and fruited together. For the purpose of securing an intermediate form between the Aughinbaugh and the Texas, I gathered and planted the seed of the former in August, 1881, expecting a cross between those two Blackberries. A cross between the Blackberry and Raspberry was not then intended or even deemed possible by me. I raised about fifty of these seedling plants. During the next season, 1882, I saw from the growth of the canes that the cross had produced something heretofore unknown. The canes of all except one were unlike anything I had ever seen before that time. The exception was a plant very similar in every respect to the Aughinbaugh

parent, but very much larger and of stronger growth. This was the Loganberry. In the spring of 1883 I set the gardener to cultivate these plants. In doing so, by an unfortunate accident, the Loganberry plant barely escaped extinction. When he got through with it there were but two or three buds left to fruit that year. The last of May, 1883, the fruit ripened, and then for the first time the extent of the creation was noticed. It has been repeatedly stated in public prints that I entertained the idea when I planted those seeds of a cross between the Raspberry and Blackberry. I am sorry to disturb one of the supposed truths of history, but candour compels me to say that such is not the case. I did not then deem such a cross possible, and did not know what I had done until May, 1883, when the plant first fruited. Subsequent observations of the Loganberry have confirmed me in the belief that it is entirely unique and distinct as a fruit. It is as much a new and individual creation of the Rubus family as the Blackberry or Raspberry. Repeated plantings of the seed since that time have confirmed this individuality. Out of thousands grown from seeds not one has to my knowledge ever shown any of the distinct characteristics of either parent; not one has gone back to the original type of either the red Raspberry or the Auginbaugh Blackberry. Most of the seedlings, to be sure, are inferior to the original; perhaps one in 100 only has any merit whatever, but they are all, like the Loganberry, essentially a red Blackberry, but similar in form of cane, leaf, time of ripening and sex of flowers to the original Loganberry. All my efforts, too, in the direction of crossing the Loganberry with either of its parents, or with the other seedling crosses between the Auginbaugh and the Texas have so far been failures.

The characteristics of the Loganberry as to shape and conformation of fruit, and the canes and roots, are essentially those of the Auginbaugh. Unlike the Raspberry parent, they have no adventitious root-buds, being propagated entirely by growth from the tips of the canes, like the Blackcap Raspberry. The fruiting canes are replenished each year by shoots from the crowns, which fruit and die yearly like all others of the Rubus family. The core remains with the fruit like the Blackberry. Its principal similarity with the Raspberry is in the colour and the flavour, although the Blackberry dominates in flavour as well as in all other characteristics except colour. As to the fact of the plant being a hybrid between the Blackberry and the Raspberry, of course there is no absolute proof. The colour, with the distinct Raspberry flavour of the fruit, and the circumstances under which it originated, I think render the fact of such a cross almost certain. Since then, too, the possibility of a cross between the Raspberry and Blackberry has been demonstrated beyond a doubt. At the same time as the origination of the Loganberry, and from the seeds planted with the seed that produced that fruit, another creation was produced in the Rubus family of very great interest. I have stated that from the seeds planted in 1881, about fifty plants came, of which the Loganberry was only one. These plants were crosses between the High Bush Texas and the Auginbaugh Dewberry, and are in the Blackberry family just as unique as the Loganberry. Most of the characteristics of this new Blackberry are from the mother, the Auginbaugh. Like the Loganberry, it has no adventitious root-buds, but is propagated from the tips only, the same as the Auginbaugh and the Logan. The berry is very long; specimens have been found 2½ inches, shining black, with the flavour of the Rubus ursinus. The canes are peculiar. They are covered with small spines, thickly interspersed and not very strong. The canes are sometimes 1½ inches in diameter, and start up in the spring like the High Bush, but when they get 4 feet or 5 feet high they start off with a trailing habit and sometimes grow over 30 feet long, and towards autumn the tips seek the ground and root. One of the great characteristics of all these fruits is the fact that they ripen very early, generally beginning in this climate in the

middle of May, six or eight weeks earlier than the earliest of the High Bush varieties. As to the adaptability of these berries to the different climates, I am not able definitely to say. The University of California has experiment stations in all altitudes in this State—high, low, hot, dry, and moist. At all of these stations they have the Loganberry, and the reports from all are that the berry is doing well. As I have before stated, the Loganberry is reproduced from seed, and while such seedlings are essentially Loganberries, not one in a thousand is equal to the original. Such seedlings are rank frauds when sent out as the Loganberry, and unprincipled nurserymen in this State, having in view only a little temporary advantage, have been flooding the East with such seedlings, and wherever sent the result has been condemnation of the Loganberry. The bulk of the fruiting of this plant is in May, June and July. However, the autumn crop is often of considerable importance.

#### CHERRIES FOR AMATEURS.

AMATEURS are often at a loss to know what varieties of Cherries to plant, and their too often limited wall space necessitates a wise selection, as many of the choice dessert Cherries are such strong growers and shy bearers, and are not brought into a profitable state, except by the most skilful treatment. Others there are, however, that with ordinary attention usually give a good return, always provided the climate is tolerably good, as few of the Bigarreau and finer sorts do satisfactorily as a rule in midland and northern districts. A very early, handsome black Cherry which should be in every collection, however limited, is Early Rivers. It is grown as a standard in the south and succeeds well, but on a wall the fruit grows much larger and the flavour is rich and juicy. Another fine early variety is Belle d'Orleans, of a handsome red colour, bearing very freely and paying well for wall space; the flavour is very good. Too many early fruiting kinds are not desirable in a limited collection, but where the soil is heavy and none too warm no better variety can be planted than Elton. In such a medium most sorts soon gum and canker, even if lifting when young and replanting are practised, so that Elton will suit those who have not strictly a Cherry soil. The flavour is average, and colour yellowish-red. Of the Bigarreau section, Governor Wood is one of the finest, and may be safely planted on wall in midland localities, seldom missing a crop, and in good Cherry seasons bearing enormously. Like many of this class, it is liable to gum if planted in low, dry situations. Kentish Bigarreau or Amber Heart, as it is sometimes called in Kentish gardens, is still one of the most reliable and profitable Cherries, a red and yellow fruit, growing to a very large size. This variety is cultivated extensively for market in Kent and Sussex. It is a constant bearer and sure to please those who plant it. The well-known Bigarreau Napoleon succeeds well in most gardens in good climates, bearing freely fine showy fruit of excellent flavour. It is good for mid-season supply. For keeping up the supply during August, Black Circassian, or Tartarian, a noble black Cherry and one that succeeds on a wall in cold districts better than many, is indispensable. The quality is first rate, and it will hang in good condition for several weeks if netted to protect from birds. For late supplies, Florence, a variety grown in standard form in Kent, produces enormous fruit on a wall, but must not have a rich larder, or growth will be too strong. In market gardens this is known as Wellington. As a very late variety grown on east or west walls, Late Duke, a slightly acid variety, bearing well and hanging long, is reliable in all climates and soils.

When young Cherries take to a gross growth when first planted, the best remedy is to lift in November and replant near the surface in soil to which has been added a good percentage of old mortar rubble, ramming very firmly and depriving the trees of any extra coarse roots. Planting on stations composed of slates or tiles is always advisable. C. C. II.

**Strawberries in the north.**—Royal Sovereign Strawberry has become very popular in the north by reason of its earliness, free bearing, and large fruit of good quality. It does not grow so freely on some soils as Garibaldi, Duke of Edinburgh, President and John Ruskin. The last is among the earliest I have tried and a most abundant bearer, especially the first year after being planted. For preserving it is first-rate. I prefer planting out those which have been forced in pots on rich ground, well trenched, then trodden firmly while the weather is dry. During June is a good time to plant. The ground between can be utilised for Spinach to be removed while the crop is young, Onions to be pulled green, Lettuce and young Turnips. Garibaldi as a general cropper is popular in the north.—M. TEMPLE, *Carron, N.B.*

**Fruit notes.**—I do not remember such a season of wind, rain and changeable temperature as we have experienced here for three months past. When Apples, Plums, Cherries (in fact, most other fruits) were setting, rains, cold and heavy, were continuous, and the wind was such as one would consider severe during January, and seldom remained twelve hours in the same direction. North-easterly winds were most prevalent. Though Apples, Cherries and all small fruits are very abundant, they were well thinned. It is well when planting in orchards and gardens to keep in mind that many varieties of fruits are more hardy than others. Those Apples which have set very freely are Lord Grosvenor (in clusters all over the trees), Cellini, Golden Spire, Northing (Greening, King of Pippins, Seaton House, Stirling Castle and Yorkshire Greening. These never fail, and always give a useful supply from August to May.—M. TEMPLE, *Carron, N.B.*

**Peach stones splitting.**—One very important and necessary constituent in all fruit soils is lime. This applies more particularly to stone fruit. I know some soils practically free from lime. These are useless for stone fruit unless liberal additions of good air-slaked lime are made. It would be interesting if the correspondent to whom "W. I." replied in last week's issue would kindly say whether his soil is on a limestone or chalk formation or otherwise. If the borders are renovated, as "W. I." suggests, I would strongly recommend the addition of say one part of air-slaked lime to twenty of "W. I.'s" admirable border compost, as lime enters so largely into the process of stone formation, and I believe in a great measure prevents stone-splitting. I find, as a rule, a great many persons put too much faith in old mortar rubbish. This material is of little use for supplying the necessary substance, although it is admirably suited for correcting adhesiveness in strong soils.—J. EASTER, *Nostell Priory Gardens.*

**Browallia speciosa major.**—Blue flowers are generally scarce in the greenhouse during the summer and early autumn months. This Browallia, however, is just the thing for this purpose, as it is of easy culture and will continue to bloom for a long time, while the flowers are of a beautiful shade of deep blue with a lighter centre. This refers to the blooms when they are first expanded, for with age they become paler, while, singularly enough, they also increase in size. It may be readily grown from seed, which ripens freely. Sown in the spring in a gentle heat, the young plants when large enough may be pricked off into pots or pans. They may then be potted off singly, or, what is far better, half a dozen or so can be dibbled into pots 5 inches in diameter, and in this way, if sturdy growth is encouraged,

they form neat little specimens. Good loamy soil, with an admixture of well-decayed leaf-mould and manure with a dash of sand, will suit this *Browallia* well. It is a native of the temperate regions of South America. An allied species, *B. elata*, has been cultivated in gardens for years.—H. P.

## TREES AND SHRUBS.

### THE WISTARIA.

It is a pity people do not more often plant the *Wistaria*, as the beauty of old specimens when in bloom is worth striving for. The *Wistaria* is a fast growing plant, and one has not long to wait before getting some flowers if it is planted under favourable conditions in a free, light soil. In exposed places the flowers of the *Wistaria* are sometimes injured by severe frost before they open, but in favourable years they escape, and then this fine climber is seen to the best advantage, the rich green foliage making a fine background to the flowers. It is most often seen against a wall, but it has also a picturesque appearance when its vigorous branches can ramble into the head of a neighbouring tree. If planted in this way care must be taken not to put it too close to the trunk of the tree, as then it is simply starved to death.

When growing the *Wistaria* against a house a little care in training is well repaid. A system of pruning nearly similar to that of the spur system in Grape pruning should be adopted, or rather a system combining that with the plan generally adopted for fruit trees which bear their flowers and fruit on old spurs. In the month of July all shoots that may be reserved on the main or leading stems should be pinched back to within a foot of the main stem in order to check the rampant growth. These shoots will again break into growth from the buds just behind where the shoot was stopped, and after these shoots have grown a few inches they should be again stopped. The result will be the formation of flower spurs at the foot of the shoot first shortened. Early in the following spring these shoots should be cut back to within five or six eyes of the main stem, and the young growths from these eyes are then to be treated in the same way as those of the previous year. By following this course of treatment long continuous wreaths of flower will be produced. When the leading stems have reached the length it is intended they should attain they should also be stopped, and the result will be a trim appearance of the plant, which yet will not appear stiff and formal. W. T.

**Ceanothus azureus.**—It is singular that the varieties of this pretty old plant are not more grown. It is true they are a little tender in some places, but there are many things given frame cultivation during the winter that are less deserving than these. Nor is frame cultivation necessary, for in plenty of places this proves almost perfectly hardy. In an Essex garden last week I noticed a plant trained up a potting shed wall—not the ideal place for it by any means, still it was extremely pretty. This plant has stood the last five winters in its present position, and it is now about 6 feet high and almost entirely covered with the pretty blue flowers.—C.

**Platanus occidentalis argentea variegata.**—As exhibited at the Drill Hall last week this plant promises to be of some value. The effect produced by its remarkable variegation is very good indeed, and the plants, which were some 8 feet high, were in excellent condition. Unlike many highly variegated subjects, the variegation does not appear so much in the young leaves, these being of a buff tinge, but as they get older the white variegation stands out in

marked contrast. If of permanent character, it should prove of considerable service among ornamental trees for parks and gardens.

**Spiræa japonica glabrata.**—This *Spiræa*, of which there is a large circular bed at Kew, at the present time presents an almost unbroken sheet of blossoms. There is a good deal of confusion in the nomenclature of this section of *Spiræa*, the specific name of *callosa* being far more generally used than that of *japonica*. The variety *glabrata* is certainly a very desirable form, the bushes composing the bed in question being 3 feet to 4 feet high, and each shoot is terminated by a large flattened corymb of blossoms, which when first expanded are of a bright carmine-rose tint, becom-

appearance unless the old flower-heads are picked off, as if this is done the secondary ones develop and continue the display of bloom. It is a pretty little plant for the rockwork. *S. bullata* also bears the specific name of *crispifolia*.—T.

**The white Jasmine.**—In any selection of flowering climbers this must have a place, for common though it be, it is admired by everyone, the handsome deep green foliage serving as an admirable setting to the pure white fragrant blossoms. Many a country cottage may be seen adorned with this Jasmine, and when allowed to grow at will it is really charming. The display of flowers, too, is by no means fleeting, for it blooms more or less throughout the summer. If

it is secured to any substantial support and then allowed to grow at will it assumes a dense bush-like mass, totally devoid of any stiffness or formality. Several examples of this Jasmine unfavourably situated in different parts of London, yet laden with blossom, have come under my notice of late. The stiff, vigorous-growing Himalayan *Jasminum Wallichianum* is also in many places flowering freely, but not where at all unfavourably situated.—T.

**Deutzia crenata** and varieties.—Soon after midsummer the different forms of this *Deutzia* are at their best, and the two double-flowered varieties are certainly entitled to a place among the finest of our flowering shrubs. Besides the typical kind with single white blossoms, there is a double one with white flowers, and another in which the exterior of the blooms is tinged with purple, which feature is far more pronounced in the bud state than it is after the blossoms are expanded. From a fine-foliage point of view *D. c. punctata* or *variegata* is noticeable, the leaves being freckled in a peculiar manner with green and white in about equal proportions. The bark of the young shoots is reddish, and the effect of a small bush of this variety as viewed at a distance is very like that of



A flowering branch of *Wistaria*. From a photograph sent by Mr. Mallet, Culverwell, Bath.

ing paler with age. After the principal cluster of blossoms secondary ones are pushed out, and by this means the flowering season is considerably prolonged. It is a good plan to cut off the old flower clusters as soon as they are past their best.—H. P.

**Spiræa bullata.**—This, the smallest growing of all the members of this extensive genus, forms a compact little shrub not much more than 6 inches high, every shoot of which is just now terminated by a crowded cluster of bright carmine-coloured blossoms. They do not, however, retain their freshness long and the plant soon presents a dull

*Vitis heterophylla variegata*, in which the same colours occur. *Deutzia crenata* is, compared with the popular *D. gracilis*, quite a giant, and it is a worthy associate of the Mock Oranges, all of which flower at much the same time.—T.

**Erica stricta.**—Of the taller-growing Heaths, there is none better adapted for our climate than this. Whilst such species as *arborea*, *codonodes* (properly *lusitanica*) and *mediterranea* all suffered badly in the spring of 1895, some being wholly killed, this species survived with but little injury. This summer it has flowered profusely, and even now is still pretty. Like the other species

just mentioned as less hardy, it is a native of South Europe, and has been in cultivation since 1765. Its leaves are linear, scarcely one-fourth of an inch long, dark green, and produced thickly on the stems in whorls of four. The flowers are borne in umbels terminating each twig, and are of a bright purplish rose: they are pitcher-shaped, contracted at the mouth, and are about as long as the leaves. The shrub is of rather erect habit, and grows 5 feet to 6 feet high about London, but probably more in milder localities.—W. J. B.

**Cratægus cordata.**—Although introduced as long ago as 1738, this Thorn is still quite an uncommon one in this country. It is said also to be rare in a wild state in its native home—the United States. Like most of the Thorns, it is a small tree and is not often more than 20 feet high in Britain. It differs from all the others in being the latest to bloom. The flowers commence to expand in the latter half of June, and even now (in mid-July) the trees are still white with them. They are followed by the small fruits, which are only one-third of an inch across, but bright red when ripe, and produced in sufficient quantity to render the trees ornamental at that time. The tree is distinct also, and easily recognised by its leaves, which are of a peculiarly glossy green and quite smooth; they are 2 inches to 3 inches long, the main outline triangular, but with margins cut up into several lobes, these again being irregularly notched. The branches are armed with slender spines, the largest 3 inches or so long. The neat and distinct appearance of this Thorn, as well as its late flowering, ought to obtain for it a greater amount of notice than has yet been given to it. It is commonly known as the Washington Thorn.—B.

**Spiræa discolor** (syn., *S. ariaefolia*).—This species, although it does not possess the rich colour of some of the dwarfed ones now in bloom, is still one of the most graceful and striking of Spiræas at this or any season. It is a native of North-west America, and was introduced in 1827. It reaches 8 feet to 10 feet in height, and is thus one of the tallest Spiræas we possess. Its strong shoots are erect at first, but many of them droop gracefully over at the top where the large panicles are borne. The panicles are pyramidal in outline and as much as 6 inches or 8 inches in diameter at the base. The flowers are of a dull white, and the panicle has a somewhat fluffy appearance on account of the numerous and prominent stamens each flower possesses. The species is often called by a more recent name, *ariaefolia*, which refers to the resemblance its leaves bear to those of *Pyrus Aria*: they are, however, much smaller, being 1½ inches to 3 inches long but the outline is much the same, and the lower surfaces are covered with soft hairs that give a greyish appearance. Scattered through the delightful woods at Dropmore there are numerous fine examples of this Spiræa. Many of them are in semi-shade, and, standing well above the undergrowth, the graceful flower-laden branches have a most charming effect.—W. J. B.

**Ligustrum sinense.**—There are few hardy shrubs in flower now that make so conspicuous a feature in the garden as this Chinese Privet. It is, indeed, the most effective of all the species grown for the sake of their flowers. Its habit is graceful, and if the plants are given a sufficiently sheltered place, also luxuriant. It is tenderer than some of the Privets, and is best planted with other shrubs for the sake of shelter. Although never killed outright by cold in the London district, its branches are cut back in severe weather, and the plant loses some of its natural elegance thereby. Its leaves are of a rather light green, thin in texture, with the petioles so twisted as to bring the blades into two opposite rows. The natural habit of the shrub is to form a wide-spreading, rather flat top, narrowing to the naked stems near the ground. At the present time the foliage is almost hidden by the panicles of white flowers, which form a dense canopy over the whole upper part of the shrubs. In the arboretum at Kew it has been planted in groups, and the masses of white are very striking, all the

more so now that shrubs in flower are becoming much scarcer out-of-doors. It is not evergreen, but retains its leaves and fruits (which are small and purple) almost through the winter. This Privet was introduced from China by Robert Fortune about 1861 or 1865.—W. J. B.

**The Spanish Broom** (*Spartium junceum*).—Among the comparatively few leguminous shrubs now in flower, the Spanish Broom is the most striking and beautiful. I never saw it so fine or in such abundance as it is in the shrubberies surrounding the railway station at Taplow, in Buckinghamshire. Here large rounded bushes averaging 6 feet in height and perhaps 4 feet in width are now covered with glowing masses of bright clear yellow flowers. The species is a native of the countries of South-western Europe, but it is hardy in all but exceptional winters, such as that of 1894-5, when it was cut back or killed outright in many places. The flowers are among the largest seen in the hardy Leguminosæ, measuring 2 inches in vertical diameter, and the heart-shaped standard petal being exceptionally large. The whole flower is of a bright yellow, varying, however, in depth of shade in different plants. The shrub is of erect growth and the spikes terminate the shoots; one spike will bear twenty or more flowers, about half-a-dozen of which are open at one time. The leaves, which are few, measure from 1 inch to 2 inches long and are quite narrow. The young stems are very Rush-like, being dark green, slender, and largely filled with pith. Seeds ripen in abundance and they afford the best means of increase. The habit of the shrub is improved by the shoots being frequently stopped when it is young. There used to be a double-flowered variety in cultivation, but it appears to be lost. Does any reader of THE GARDEN possess it or know where it can be obtained?—B.

BOOKS.

LAWNS AND GARDENS.\*

Judging by the many books on garden design, gardening is rapidly becoming a fashionable art. People begin to see in it something more than the rule of thumb which they might have concluded it to be from much of the flower gardening still existing both in America and England. The author of this book may be a very able practitioner, but his book bears the ugly mark of many books of our own day in heavy clayed paper and cuts done by some brutal processes, some of them the worst we have ever seen—for instance, p. 257 Chinese *Wistaria*; p. 238, *Black Haw*; p. 227, *Spiræa*. Coming to the matter of the book, one is rather stopped at the outset (page 4) by the following:—

*It is evident that nowhere in the world a wholly natural scenery exists; even in the high Alps the mountaineer builds his tiny cottages and surrounds it with degrading associations; there are hardly any primitive forests left, and if there were they would not be wholly natural.*

A statement untrue in all ways. Leaving out America and the vast regions there still untouched by man, there is scarcely even a small country in Europe which has not many thousand acres of perfectly natural forest, the very uselessness of the ground and its elevation in many cases compelling that state of things. Young or old writers who make such silly statements would be much better prepared for their work by an excursion through such forests. They would get many lessons both in form and grouping, and also learn how the rocks come out of the ground naturally, and how flowers take to them. Another very ignorant statement is at page 31 about wild gardening.

*Of late years wild gardening has been much recommended, and it has been claimed that anybody, by sowing a mixture of flower seeds in the garden, would obtain the most charming results.*

It would do the author good to see a few clouds of the bolder *Narcissi* some April day happily in

\* "Lawns and Gardens." By N. Jönsson-Rose. Putnam's, New York.

the grass in a wild garden, or in June to go along a grassy path with many wild *Roses* on each side. He would then perhaps begin to see what the wild garden meant in some ways. Though parts of the book show a good disposition and a tendency towards right effort, when one is confronted by statements of this kind it is difficult to persevere in reading whilst there are so many other sources of instruction. The illustrations of bridges and garden buildings, although the author rightly asks for simplicity, are, like all illustrations in this kind of book that we have seen, far too pretentious. In none is this more visible than in French gardens, in which far too much attention is paid to structures that ought in better design to take their place simply and quietly, as a boathouse does on a Norfolk broad or a bridge over a stream in a country district in Wales. But these things would not look so well to many in a drawing as the simpler work, and gardens, like buildings, are no doubt destined for a long time to be ruined by showy plans and designs. W. R.

WOBURN EXPERIMENTAL FRUIT FARM, FIRST REPORT.\*

WHAT in the United States of America and some few other countries is undertaken by the Government in England largely left to private individuals to carry out. As far as fruit culture is concerned, anything in the shape of well-planned experiments has not been attempted on a large scale and in a strictly disinterested manner till quite recently, and it was left to the Duke of Bedford, assisted by Mr. S. U. Pickering, F.R.S., to step into the breach. A series of ably-planned experiments with all kinds of hardy fruit were initiated in a large field at Ridgmont, Beds (adjoining the Woburn Agricultural Experimental Farm), in 1894, and already an elaborate report of nearly 200 pages is before us. In this report we are presented with full particulars of all that has been done, with much that is still in contemplation, and from it will be gathered that neither pains nor expense will be spared in making the undertaking the success it fully deserves. Much that is interesting and corroborative is placed before us in this first report. Practically nothing but what is already known to experienced fruit-growers has been brought forward, nor is there much probability of really valuable information, from a commercial point of view, being forthcoming for many years to come.

It ought not to be taken for granted that because the average farmer knows so little about fruit culture the professional fruit farmer is equally ignorant. On the contrary, many of them are shrewd, clever, and, above all things, very practical men, fully capable, too, of growing fruit successfully and profitably—in some instances under adverse circumstances. These men are not likely to be benefited by the Woburn experiments, and in all probability, if the reports were presented to them, would laugh at those puny half-acre plots, intended, presumably, to revolutionise fruit-farming for profit, and also treat all those formidable columns of figures with which the report abounds much as the authors went out of their way to suggest should be done with certain Government publications, viz., trouble themselves no further about matters which are evidently not adapted to their comprehension (see page 157). The scientist revels in his columns of figures—cannot have too many placed before him, in fact. Not so the market grower and farmer. These latter would prefer reports as presented by those in charge of the various experimental stations in America, the Cornell University in particular. In these there are numerous practical hints and conclusions, presented in a form easily comprehended.

At Woburn an almost endless series of experiments are now in full swing. Every possible

\* "Woburn Experimental Fruit Farm." First report, by the Duke of Bedford and Spencer N. Pickering, F.R.S. Eyre and Spottiswoode, London.

right and wrong way of treating fruit trees, notably Apples, will be shown, and there ought really to be something among them to prove of educational value to the majority of visitors who may inspect them during the next quarter of a century. Already the ill-effects of planting carelessly, planting in shallow soil, and not keeping the surface-soil free of grass or weeds are, according to the report, showing plainly, the photographs of neglected as compared with properly tended trees being most suggestive. It is in the matter of planting too deeply and sowing over the ground at once, instead of a few years hence, where so many farmers are at fault, though in not a few counties these blunders have been repeatedly and forcibly brought home to them by horticultural instructors and others. They also require educating in the art of pruning young trees, and in this direction, again, the Woburn report gives instructive examples of what is best to be done. Plots are also set apart for demonstrating the correct time for both summer and winter pruning, and any doubts upon these points ought to be set at rest—say in the course of ten years. Nothing very conclusive can be demonstrated much under that time. The Woburn tenantry will have good opportunities afforded for deciding which are the best kinds of hardy fruit to plant, the trials of varieties being most complete; but beyond Bedfordshire the information gained in that direction will not be very reliable. Strawberries, again, are on trial, eighty or more varieties occupying separate plots, and have nearly thirty pages in the report devoted to remarks upon them. If from among these a thoroughly reliable late variety, good for either market or for private gardens, is found, that will be well worthy of being made public, and a few other facts, plainly told, about other little-known varieties would be welcomed by innumerable Strawberry growers. We are, however, warned not to place too much reliance upon these experiments with Strawberries, for it is stated on page 190 that "Even within the limits of the farm (20 acres) the same varieties have given different results according to their situation, and there is evidence to prove that the Strawberry is very sensitive to slight variations in the conditions under which it is grown."

Hedgerow planting has not received nearly as much attention at the hands of British fruit-growers as it has on the Continent, numerous excuses, including the boy "bogey," being offered for this. At Ridgmont various hedges have been planted for "protective purposes" of fruit trees of different descriptions, and these will be scanned very closely during the next few years. In these hedgerows are comprised nine varieties of Crabs, five varieties of Plums, four of Damsons, one of Bullace, four of Nuts, two of Quinces, three of Medlars, and one species of Berberis. Some of the most profitable hedgerows in this country are to be found in Essex. In this instance the hedge is formed of Filberts, with standards of Apples and Damsons, about 12 feet apart, dotted among them. Why are there not more dividing and shelter hedges of this description to be met with? There ought to be no waiting to see the results of the Ridgmont experiments. W. I.

**Seedling Gloxinias.**—Young Gloxinias from spring-sown seed are often neglected, being left in the seed-pans or pots too long and becoming drawn and weakly. The tiny plants should be thinned out where too crowded as soon as they can be handled. A shady, but not dark position and a moist temperature of 65° or 70° suit them. February-sown batches should be first potted into very small pots, and later on into  $\frac{1}{2}$ -inch pots, the former size being sufficiently large for those sown in March and April. Thrips often attack the foliage unless the syringe is freely used, a gentle fumigation once in three weeks being a good safeguard against the pest. A compost of three parts light fibrous loam and one part leaf-mould and silver sand will grow Gloxinias well. These yearling bulbs, if care-

fully wintered in a temperature of say 50° or 55° and potted the following February, will make grand plants the second summer.—J. C.

## ROSE GARDEN.

### BANKSIAN ROSES.

THESE charming Roses are worthy of a place in every garden where a suitable position can be found for them. In northern or cold districts none of the Banksian Roses thrive satisfactorily in the open air unless it is in a sheltered posi-

tion and against a south wall. In such cases as these, therefore, it is best to give them a place under glass. The back wall of a greenhouse is a capital position for them, and so is the roof or rafters of a conservatory. In southern and warm districts, however, the Banksian Roses should be planted outdoors, for there they are undoubtedly seen to the best advantage. Few climbers produce such a pretty sight as these delightful Roses during the month of May and in early June. Near Winchester, in Hampshire, I have often seen a cottage that has its front wall literally laden with clusters of the yellow kind. The tree, which has been in its present position for more than thirty years, has

been carefully attended to, never disappointing its owner by not producing a moderate amount of bloom even in the worst seasons. Last year, when I saw it about the middle of May, it presented a most charming appearance, being one mass of yellow. This variety appears to be rather hardier than the white-flowered kind and more free-blooming. Both, however, are good and deserving of greater attention than has hitherto been paid them. There are several varieties of the type. One named Fortunei produces flowers similar to those of the old yellow, but larger, while the same may be said of alba grandiflora in regard to white



*Banksian Roses. From a photograph sent by the Rev. John A. Lloyd, The Vicarage, Mere, Wilts.*

tion and against a south wall. In such cases as these, therefore, it is best to give them a place under glass. The back wall of a greenhouse is a capital position for them, and so is the roof or rafters of a conservatory. In southern and warm districts, however, the Banksian Roses should be planted outdoors, for there they are undoubtedly seen to the best advantage. Few climbers produce such a pretty sight as these delightful Roses during the month of May and in early June. Near Winchester, in Hampshire, I have often seen a cottage that has its front wall literally laden with clusters of the yellow kind. The tree, which has been in its present position for more than thirty years, has

varieties. Jaume Serin, with yellow flowers, and odoratissima, which produces clusters of fragrant white blooms, are also useful varieties.

The culture of Banksian Roses is comparatively simple. As has been said, they require a warm south wall, and should, moreover, be planted in a kindly soil. That of a light loamy or sandy nature is most suitable for them; indeed, to plant in other than this is courting failure. If possible, a bricked-in border should be given them, especially where the soil has a tendency to be wet, and this must be well drained by placing a layer of broken bricks in the bottom. I have established plants by placing them in a tub well drained and sunk

into the ground, filling it as full as was necessary with a prepared compost of turfy loam and decayed manure. This involves a little more than ordinary trouble, but it pays. When planted in greenhouse borders, of course less care need be taken, especially when the roots will be confined to a certain space. But, whether indoors or out, it cannot be too strongly impressed upon readers that to obtain the best results, planting must of necessity be performed in a judicious and workmanlike manner. The pruning of Banksian Roses is somewhat imperfectly understood. They should be pruned immediately after flowering. Thin out the long shoots, laying in sufficient to cover the space only, and these at a good distance apart so that they may become thoroughly ripened. Those that are laid in should be shortened, say to about one-third their length in most cases, just removing the tips in others. From the points of these, new growths will be formed during the summer, and in early spring cut them back to within 2 inches or 3 inches of their base, leaving say three good eyes. From these a bountiful supply of flowers will be produced. A mulching of decayed manure placed around the stems and over the roots will help to conserve the moisture during summer and assist the tree wonderfully, while in winter it may be necessary to neatly twist a few hay or straw bands around the stem if the weather is at all severe. C.

**Sweet-scented Roses.**—It is high time the National Rose Society took up this matter of fragrance with spirit. Let every Rose lose one, two, or more points on the show table that has no odour. Let no Rose receive a medal as the best Rose at any show unless sweet-scented. I will only make one more suggestion for the present, and that is, that at every show held by the National Rose Society, and all societies affiliated with it, one or more prizes shall be offered for collections of the sweetest Roses and for the sweetest Rose in the show. The fact is, while we have been developing size, laying on colour, elaborating form to great perfection, we have done little or nothing to intensify the sweetness of our Roses.—D. T. F.

**SOCIETIES AND EXHIBITIONS.**

**NATIONAL VIOLA SOCIETY.**

**BOTANIC SOCIETY, JULY 17.**

THE second annual exhibition of this society was held at the Royal Botanic Gardens, Regent's Park, on Saturday last, and may be considered in every way a distinct success. The exhibits were arranged on either side of the corridor leading to the conservatory, and this year, owing to the free growth of *Cobaea scandens*, which is used on the roof, capital shade was obtained overhead. The south-western side being covered with green baize, the enclosure was kept in a cool condition, and the exhibition consequently rendered more successful. Only in a very few instances, even late in the day, was there to be seen any evidence of the flowers withering, the sprays of blossoms looking remarkably fresh after so long exposure. The exhibits came from all parts of the country, several well-known Scotch growers sending up interesting collections, while flowers from the west country were useful for comparison with the former and those grown in the neighbourhood of London and the south of England. The honours of the display were about equally divided, amateur growers and those of the trade occupying about half of the space allotted. There appeared to be more exhibitors than last year, thus showing that a greater interest is being evinced in the flower, more especially in the amateur section. There seemed to be a general feeling that

the display was a few weeks later than it ought to be, the climatic conditions prevailing in the south during the past fortnight being exceedingly trying, and much against the different forms of the Pansy being seen in first-rate condition. This, combined with heat of an exceptionally trying kind for two or three days previous to the show, made the display all the more meritorious when these facts are considered.

Fancy Pansies were seen in goodly numbers and in fairly good form for so late in the season, and a few trays of the show forms were also in evidence, although these seemed of interest but few. Tufted Pansies, however, were well shown, and made by far the largest display. The great variety of their colouring—in many instances of the most refined kind, combined with the chaste characteristics of many of the newer varieties—made the display of greater interest to the many visitors to the show during the afternoon and evening. The public appeared to evince a greater interest than on any similar occasion during recent years, and there is a better prospect for the flower than at one time seemed possible. Growing plants, too were shown, the free-flowering character of the Tufted Pansy perhaps being better appreciated in this way, while one class of especial interest was that in which the flowers were arranged in specimen glasses, with foliage added to give additional effect. This latter competition proved the value of the Tufted Pansy for table decoration, the blossoms keeping beautifully fresh and no stiffness being apparent in their arrangement.

**TUFTED PANSIES.**

The premier class in the open section was for forty-eight sprays of Tufted Pansies, distinct, nine blooms in each spray, and arranged with their own foliage. The leading position was occupied by Mr. W. Baxter, Woking, who had a very nice lot of flowers of good size, and representative of the different types of the flower now finding most favour. His best sprays were Mrs. C. F. Gordon, Craigie, Christiana, creamy white, with a large, rich orange eye and very dwarf; Wm. Haig, the best of the indigo-blue flowers; White Empress, a new rayless white self; Stobhill Gem, an exquisite flower; Lemon Queen, a useful pale yellow self; Cherry Park, Endymion, a rather large flower, in colour half-way between Ardwell Gem and Lemon Queen; Cottage Maid, one of the best dark fancy flowers; Ardwell Gem, Princess Louise, a medium-sized, pure rayless yellow self and a good bedding sort; Charm, Florizel, one of the very best, blush-lilac; Blush Queen, Marchioness, pure white, neat orange eye; and Yellow King, a dense yellow bloom of good size and substance. The only other exhibitor in this class was Mr. J. Forbes, Hawick, N.B., who was placed second with a nice lot of flowers, conspicuous among them being Lord Salisbury, an immense pale yellow flower of much substance; Edina, clouded and streaked blue on a grey ground, good size; The Mearns, Mrs. Daniel, citron, yellow eye; and Magie, a deep rich rose flower and very striking. For twenty-four sprays, distinct, six blooms in each spray, Mr. J. Smellie, Busby, near Glasgow, N.B., was placed in the premier position with nice fresh, clean, and large flowers. They were a beautifully even lot, his best varieties being Dorothy, a lovely pale blue self with a neat yellow eye; Liz Barron, a very large circular rosy purple; Duchess of York, white, with well-defined dark rays; A. J. Rowberry, deep rich yellow rayless self; Maud, a beautiful pale rayless flower; Sir Visto, large, striped deep blue flower on a white ground; Lizzie Paul, good yellow rayed self, large; Iona, and Dandy Dimmont, petals alternately marked purple and white. Mr. M. Campbell, Blantyre, N.B., was a good second. Sheelah, pale rose, with deep crimson centre, a very effective flower; Isa Fergusson, very dark blue-black lower petals, upper ones glossy blue; Magie, Lizzie Paul, and Border Witch, one of the prettiest of the edged flowers, being the best. There were two competitors in the class for twelve rayless kinds, Mr.

J. Forbes taking the leading position, his best flowers being Florizel, Marchioness, and Border Witch, Messrs. Isaac House and Son, Coombe Nurseries, Westbury-on-Trym, Bristol, securing second place with A. J. Rowberry, Princess Louise, White Empress, and Duchess of Albany in good form. In the class for six sprays rayless, miniature type, Mr. Forbes was first with Ophir, deep yellow; Violetta, white; Marginata, white, faintly edged blue, and Gold Crest, golden yellow. A pretty lavender-blue seedling in this stand was also much admired. Mr. J. Smellie was second. The class for three sprays yellow selfs was a very interesting one. Mr. M. Campbell was first with good sprays of A. J. Rowberry and Lizzie Paul, while Mr. J. Smellie closely followed him with A. J. Rowberry, Lizzie Paul and Mary Gilbert, altogether a very rich lot. The class for a similar number of white flowers was secured by Messrs. Isaac House and Son with Christiana, White Empress, a superb flower, and Countess of Hope-toun. Mr. M. Campbell occupied second position with Nellie, the best of the white rayless sorts; Lady Salisbury, heavily rayed; and Duchess of York. Three sprays of the Duchess of Fife family, which includes that already mentioned with Goldfinch and White Duchess, made an exceedingly pretty display. Only one competitor entered for the table decoration, and that was a poor lot, a greater inducement than a bronze medal of the Royal Botanic Society being necessary to ensure a really good display. Mr. W. Allison, Kingston-on-Thames, was the only competitor. This class might be made a very good one if liberally treated, as the flowers are so well adapted for this kind of work. A class for which a special prize was offered was for six sprays, arranged with any other than Viola foliage. The competition was keen, resulting in Mr. R. T. Dougall being placed first with a very pretty, simple and neat arrangement. His flowers were backed with bright green sprays of Asparagus, the top spray being set off with a few pieces of grass—altogether a delightful contrast. Mr. M. Campbell was second, he using Asparagus and Maiden-hair Fern, but his arrangement was too formal and heavy. Another class of special interest for which prizes were offered by the president was for six Tufted Pansies, distinct, shown as the plants grow, to be grown in the open air in any simple receptacle. The names of a few dozen varieties from which the selection was to be made were specified, and this contained many of the best of the old and newer sorts. Mr. D. B. Crane, Highgate, N., secured premier honours with six plants growing in a circular wicker basket. His selection was confined to Blue Gown, a fine plant covered with blossoms; Ardwell Gem, freely flowered; Border Witch; Princess Louise; Mrs. Scott, pure white, very free, and another creamy-white seedling. The few intervening spaces were mossed over, adding materially to the finish. Such an exhibit should be very convincing as to the value of these plants for garden decoration, and is worthy of more consideration when making up another show. Messrs. I. House and Son were second with plants growing in pots and in a nice fresh and healthy condition. Their selection was White Empress, Florizel, Sheelah, Christiana, W. Haig and A. J. Rowberry. The amateur display under this heading was very fine, Mr. R. T. Dougall winning first prize for twelve sprays, distinct, with grand blooms. His best flowers were Nellie, Dorothy, White Duchess, very chaste; Florizel, A. J. Rowberry and Stobhill Gem. Mr. J. P. Sheldon, South Woodford, was second, his best being Goldfinch, Iona, Duchess of Fife and Ardwell Gem. For six sprays, distinct, Mr. J. Maxwell, Dalton Newton, N.B., was first with Butterfly, a heavily edged flower; Lizzie Paul, J. Pretswell and Princess Beatrice. Dr. Shackleton, Sydenham, was a good second, with neat and even flowers, Pencaitland, white, flushed yellow lower petal, Blush Queen and White Duchess being very good. For six sprays rayless flowers, Mr. D. B. Crane was first with an even lot of chaste-looking blossoms, Christiana, Nellie, Florizel, A. J. Rowberry, Devonshire Cream and Border Witch being those

staged. Mr. B. G. Sinclair, Highgate Road, was second with a pretty lot. Mr. Crane was first for three sprays white, showing Nellie, Ethel Hancock, pure white, and Christiana, Mr. Leonard Brown, Brentwood, being a good second with Vestal, Ethel Hancock and Lord Fitzgerald, pure snow-white flower. Mr. Crane was again first for three sprays yellow, showing A. J. Rowberry, Ardwell Gem and Princess Louise. The Duchess of Fife family was well shown here, Mr. J. J. Sheldon being accorded leading honours with large and well coloured flowers, Mr. L. Brown securing second position with a very fine lot. A charming contrast to the formal arrangement of the flowers was a class for eighteen varieties of Tufted Pansies, six blooms of each arranged in specimen glasses with their own foliage, neither blooms nor foliage to be wired. Mr. A. J. Rowberry, South Woodford, was a good first, with large richly-coloured flowers arranged in a free and informal manner. The system of exhibiting the flower commends itself, as showing the practical uses to which the Tufted Pansy in a cut state may be placed. At future exhibitions other classes confined to different colours, forms, &c., might with advantage be added. Dr. Shackleton was second with a fresh and meritorious display, many individual specimens being very beautiful indeed. The Tufted Pansies as a whole appear to be the more popular, and such a display cannot fail to further encourage their cultivation.

#### FANCY AND SHOW PANSIES.

These were exclusively confined to the open classes, there being no competition in the amateur classes, probably owing to want of enterprise on the part of the latter. The premier class, for which a gold medal was offered as first prize, was won by Mr. M. Campbell, Blantyre, N.B., and was for forty-eight bunches or sprays, distinct, six blooms in each spray or bunch. These were a heavy lot of flowers, and showed their appreciation of the cooler climatic conditions of the north. The best sprays were Dr. Jameson, Sir J. M. Watson, Marmion, dense violet blotch, laced rosy white; J. Jackson, Annie Ross, Colonel M. R. G. Buchanan, and several excellent seedlings. Second prize was secured by Messrs. Isaac House and Son, Bristol, with a fresh and even lot of flowers, and being grown some 300 miles further south than those in the first prize stand, were a highly creditable lot. Conspicuous among them were John Connor, Earl of Beaconsfield, Bronze Prince (good colour), and Rev. J. Abernethy. For twenty-four fancy Pansies, distinct, Mr. M. Campbell was again first, with good blooms of Colonel, M. R. G. Buchanan, J. Jackson, J. Menzies, large circular flower, white ground, neat solid purple blotch; Sir J. Watson, James P. Tait, and Miss Stirling. Mr. J. Smellie was second with smaller, but fresh blooms, Mrs. R. G. Moir, Ben Doulton, C. J. Pooler, W. P. Crosbie, and Valkyrie being in good form. The last named was first for twelve fancy Pansies, and occupied a similar position for twelve show Pansies, the best flowers of the latter being William Fulton, J. McClelland, and Busby Beauty.

Messrs. Dobbie and Co., Orpington and Rothsay, staged a fine collection of Tufted Pansies, embracing all the popular sorts, and including one or two highly-coloured flowers of great promise. Half-a-dozen well-grown plants of White Empress Tufted Pansy from Messrs. I. House and Son were also much admired. The Exhibitors' Supply Stores, Kingston-on-Thames, exhibited their many useful devices for simplifying the labours of the exhibitor.

**The Norwich Rose show.**—The northern exhibition of the National Rose Society, which was held on the 15th inst. in conjunction with the Norfolk and Norwich Horticultural Society, was a most successful one. The total number of exhibition Roses staged in the joint show amounted to 3590, which is 500 more than the average for the previous five northern shows, and greater than at any similar exhibition of the society, with the exception of those held at Birmingham in 1890, at

Chester in 1892, and at Derby in 1895. There were in all exactly fifty exhibitors and 220 exhibits. Arranging the latter according to the number contributed by each county they come out as follows: Norfolk, 55 exhibits; Essex, 46; Herts, 32; Suffolk, 23; Notts, 15; Oxford, 9; Surrey, 8; Derby, 7; Worcester, 7; Cambridge, 4; Yorkshire, 4; Leicester, 3, and Middlesex, 3. Nearly 7000 persons visited the show, which is a record attendance for a summer exhibition of the local society. —E. M., *Berkhamsted*.

#### NATIONAL CARNATION SOCIETY.

BOTANIC GARDENS, REGENT'S PARK, JULY 21.

A CARNATION show in these days is very different from what it was thirty years ago, so many new types having been obtained and new classes established. The schedule of prizes of the National Carnation and Picotee Society consists of forty classes, and when they are well filled a considerable space of tabling is required. The lover of the Carnation who grows only for exhibition finds an abundance of material to his hand, and those who, caring nothing for show flowers, but valuing them for border decoration, can have an abundance of varieties suited to their purpose. Those who prefer the striking self flowers, or the almost infinite variety of the fancies with their varied markings, or they who have a warm regard for the yellow-ground varieties, can enjoy surveying the choicest representatives of these sections, while there is abundant illustration of how delightfully the Carnation lends itself to manifold decorative purposes. Eighty years ago some sixty named varieties of double Carnations were in cultivation, for the florist was already at work improving the race. From that time onwards sorts in immense numbers have been obtained, and at present the varieties are bewildering in regard to their numbers. The winter and spring-flowering types were practically unknown three-quarters of a century ago, and if it be correct to say that the Malmaison type originated in the gardens of the French Empress Josephine at Malmaison, then it is a product of the same period. The Malmaison Carnation is valuable as filling up the interval between the winter-flowering and the outdoor summer-flowering varieties, but it is now possible to have Carnations in bloom all the year round. The culture of the Carnation for market is now a great industry. One interesting fact in connection with the Carnations grown for exhibition is the lasting value of some of them. Take Sarah Payne, which to-day stands almost at the head of the pink and purple bizarres, it was sent out fifty years ago and was in fine form at this exhibition. Admiral Curzon, scarlet bizarre, is older still, for it has been in cultivation since 1845, and if leading exhibitors were called upon to-day to name the two best flowers in this section Admiral Curzon would be one of them. Its sport—Sportsman, scarlet flake—has been in cultivation forty-two years, and is still widely grown and exhibited. Many other fine varieties, Picotees as well as Carnations, have been in cultivation for many years. Many new varieties are constantly being raised, but they are by no means always improvements upon existing varieties.

A fear that the weather might prove very hot and sunny and seriously affect the flowers if arranged under the glass corridor by the side of the large tent, led to the flowers being arranged within the latter, which under the dull morning light had a dismal appearance. The place was far too large. The light improved by the afternoon and caused a brighter appearance to the display. But the dried-up turf banks made an incongruous background to the flowers, and they were so low down that stooping was necessary to read the names. These were not faults of the executive, but of the place in which the blooms were staged. Should the exhibition be held in the gardens of the Royal Botanic Society again, let us hope that a spacious tent will be erected upon the lawn where the blooms would be seen to the best advantage and with better effect. There

were not wanting on the part of the visitors protests against the old-established practice of showing the blooms on stands with paper collars beneath them. But the exhibitor holds to the old ways because they, in his opinion, enable the individual blooms to be seen at their best, and no protests will ever alter them. The white collar, always larger than the bloom above it, enables the sharp circular outline of the petals to be displayed, showing their evenness and smoothness; so the florist will go along the old paths; but then there are many other classes in which the blooms are differently shown, and so the two schools find their ideas expressed in object lessons.

#### CUT BLOOMS.

The leading class was for twenty-four blooms of bizarres and flakes in not less than twelve varieties. The scarlet bizarres, Robert Houlgrave, Admiral Curzon, and Duke of York represented the darkest and richest flowers, because maroon and scarlet are on a white ground. Crimson bizarres have crimson and deep rose markings; some of the best were Thaddeus and Rifleman. Pink bizarres have purple and pink markings; the most striking were Sarah Payne and Arline. Purple flakes were represented by Prince George of Wales, Billy Henderson, and Charles Henwood; scarlet flakes by Tom Pinley, Fred, and Sportsman, and the soft rose flakes by M. Rowan and Sybil. This collection, which was awarded the first prize, came from Mr. C. Turner, Royal Nursery, Slough, thus regaining the old position of supremacy of some seasons ago. Mr. M. Rowan, Manor Street, Clapham, which is now almost in the heart of London, was second, he had some very fine blooms. Mr. James Douglas was third. Eight collections competed in this class. With twelve blooms Mr. Charles Phillips, Brockwell, was first, his leading blooms being mainly those already named. Messrs. Thomson and Co., Sparkhill, Birmingham, were second. Then came the selfs, bold and striking as they always are, one of the brightest features in the show. There were eight collections of twenty-four blooms, and they formed attractive patches of colour. Mr. C. Blich, gardener to Mr. M. R. Smith, Hayes, was first. Of yellow selfs he had Naiad, Mrs. Prinsep, a very fine variety, Maron, Proserpine, and Boreas; of crimson shades, Solon, and The Cadi; scarlet, Mrs. McRae and Boniface; rose, Endymion, very fine, and Tredegondi; pink, Elsie; blush, Her Grace and Purity; white, Ptarmigan, Helmsman, and Mrs. Eric Hambro, a splendid lot, mainly recently raised seedlings. Mr. C. Turner was second, and here the finest were Germania, Coronna and Miss Audry Campbell, yellow; white, Iona, and Mrs. Eric Hambro; and scarlet, King of Scarlets. Mr. Jas. Douglas was third. Mr. E. Colby Sharpin had the best twelve selfs, the leading ones, Nabob, apricot in tint; Mrs. Colby Sharpin, Thomas Parkinson, Seagull, and Ruby, rich purple. Mr. C. Phillips was second, and Messrs. Thomson and Co. third. In the class for six blooms the judges appeared to have selected the largest and coarsest, which came from Mr. S. A. Wout. The finest quality was decidedly in the second prize stand from Mr. A. R. Brown; this stand contained a highly promising blush seedling.

#### FANCIES.

Under this heading came the large and increasing section of yellow grounds and anything other than a true bizarre, flake, or self. There were six stands of twenty-four blooms, and here again Mr. C. Turner was first with a magnificent lot of flowers, chief among them The Gift, Duchess of Portland, white, striped with rose, charming; May Queen, Virgo, George Cruickshank, Primrose League, and fine seedlings, largely yellow grounds. Mr. James Douglas was second, Mr. Weguelin, Teignmouth, third. Mr. C. Phillips had the best twelve fancies. Mr. G. Chaundy, Oxford, was second. With six fancies, of which there were ten collections, Mr. W. Garton, Jun., was first, and Mr. A. Greenfield Patton second.

In the single bloom classes the best s.b. was Robert Houlgrave; the best c.b.'s, Master Fred,

Phæbe, and J. S. Hedderly; p.p.b.'s, William Skirving and Ellis Crossley; p.f.'s, Gordon Lewis and Mrs. Douglas; s.f.'s, John Wormald, Guardsman, and J. P. Sharp; rose flakes, William of Wykeham, Thalia, and Mr. Rowan; white or blush selfs, Mrs. Eric Hambro and Sir Guy; rose, Loveliness; scarlet, Verena, Little John, and Hayes Scarlet; maroon, Uncle Tom and Mephisto; yellow, Lord Wantage and Germania; bull, Mrs. Colby Sharpin and The Beau; fanies, Broderick, Cecil Rhodes, and Monareh.

The premier Carnations were—bizarre, R. Houlgrave, shown by Mr. M. Rowan; flaked, Matador, from Mr. J. Douglas; self, Mrs. Prinsep, yellow, from Mr. M. R. Smith; fancy, Badminton, from Mr. M. R. Smith.

#### PICOTEES.

There were six collections of twenty-four blooms of the pretty chaste Picotee, Mr. C. Turner being again first. Of red edges he had Brunette and Mrs. Gorton; purple edges, Mary and Muriel; rose edges, which greatly preponderated, Clio, Duchess of York, Favourite, Lady Emily Van de Meyer, Little Phil and Mrs. Payne. Mr. J. Douglas, who was second, had Fortrose, a light edged rose of great purity and beauty; also Constance Heron, Athene and Mrs. Sharp, and red-edged Ganymede. Mr. M. Rowan was awarded the third prize. With twelve varieties Messrs. Thomson and Co. were placed first. Mr. G. Chaundy, Oxford, was second and Mr. C. Phillips third. Mr. A. R. Brown was placed first with six blooms and Mr. T. Anstiss second. With twelve varieties of yellow grounds Mr. M. R. Smith was first, having a very fine dozen in Badminton, Doris, Voltaire, Mohican, Golden Eagle, Borderer, Mrs. Tremayne, His Excellency, and seedlings. Mr. J. Douglas came second and Mr. C. Phillips was third. With six yellow grounds Mr. Fred Hooper, Bath, came first, having May Queen, Mrs. Gooden, Florrie Henwood, Ladas, Mrs. R. Sydenham, and a seedling. Mr. C. Harden came second, he having Harlequin, and Mrs. Douglas. In the classes for single blooms of Picotees the best heavy red edges were Ganymede, Brunette, and Heart's Delight; light red edge, Mrs. Gorton and Her Majesty; heavy purple edge, Polly, Brazil and Muriel; light purple edge, Summertide, Esther, and Harry Kenyon; heavy rose edge, Lady Laura and Little Phil; light rose edge, Mrs. Payne; heavy scarlet edge, Duchess of York and Mrs. Sharp; light scarlet edge, Favourite; yellow ground, Mrs. Douglas. The premier heavy edge Picotee was rose edge Duchess of York, from Mr. C. Turner the light edge, Fortrose, from Mr. J. Douglas.

Then followed seven classes for undressed flowers, each bloom shown with a spray of foliage. The value of these as an attractive part of the exhibition was practically nil. Given an ordinary bloom of a Carnation to which is tied a sprig of foliage, and we get at the flowers filling these classes. The teaching value of these classes is no more than can be gained from the basket of a flower seller at the Royal Exchange.

Plants in pots were shown in several classes, chief among them one for twelve specimens, three and four plants being allowed in a pot. Mr. M. R. Smith was first with a very fine group, chief among them Lady Jane Grey, a beautiful soft, rosy heliotrope-coloured flower, very distinct and of fine quality. Mr. C. Turner was second and Mr. J. Douglas third. There was also a class for a single plant. Mr. M. R. Smith had the best group, occupying a space of 50 feet—a superb group of about 100 plants of very high quality. Mr. C. Turner was second. But one group occupying 30 feet was shown—that from Mr. J. Douglas, which gained the first prize. The best vase of Carnations came from Mr. J. Douglas, very tastefully arranged. Mr. M. V. Charington was second and Mr. Munt third. The best dinner-table for twelve persons was set up by Mr. C. Blick; a large centre and two side pieces, with a number of subsidiary small vases. Mr. W. Green, Harold Wood, was second with much the same arrangement, but not so elaborately finished. There were also classes for sprays

and button-holes, all of a somewhat formal appearance. Then followed the Martin Smith prizes for Carnations for the open border; for the best border variety in a bunch of not less than twelve trusses; also for six varieties of self-coloured border Carnations, and for nine bunches of flake, bizarre or fancy varieties. A careful scrutiny of these failed to leave the impression that anything was shown among them illustrating a real advance upon what is already grown. A goodly number of bunches were staged, but it appeared to be quite unnecessary to give the names of the varieties of any of the winning bunches.

#### SEEDLINGS.

What prizes were awarded to these we were unable to learn. Some of the judging had to be deferred until after the luncheon, owing to the altogether unnecessary late hour at which the judges were able to get to work. Surely such a small show can be arranged in time for the judges to commence at 11 a.m., the hour named in the schedule. One certificate of merit was awarded to light rose edge Picotee Fortrose, a very refined variety from Mr. J. Douglas.

Miscellaneous exhibits included a table of Caladiums from Messrs. B. Peed and Son, a table of charming floral decorations from Mr. J. R. Chard, Stoke Newington, Sweet Peas from Messrs. Barr and Sons, and Carnations from Messrs. Jas. Veitch and Sons and Mr. E. F. Hepper, Hoddesden.

#### Gardeners' Royal Benevolent Institution.

—We are asked to state that the Merchant Taylors' Company and the Skinners' Company have each given the sum of £10 10s. to the funds of this institution.

**Royal Horticultural Society.**—The next meeting of the Royal Horticultural Society's committees takes place on Tuesday, July 27, in the Drill Hall, James' Street, Victoria Street, at 12 o'clock. At this meeting a silver Flora medal is offered for competition (amateurs) for best collection of cactaceous plants. At 3 p.m. Mr. W. D. Drury will give a paper on "Familiar Garden Insects, Friends and Foes."

## NOTES OF THE WEEK.

**Carnation Cinnamon** is one of the most distinct as well as decided of the salmon-apricot shades, a colour as yet not over-plentiful, though among the most desirable of these flowers. Some capital blooms were shown at the Drill Hall last week.

**Tea Roses.**—Messrs. Wm. Paul and Son send us some excellent Roses, of which Enchantress is a beauty. Sylph, Zephyr and Empress Alexandra of Russia are also sent. Enchantress we have tried, and it is a good Tea Rose for this country, in which every Rose does not open well.

**Flowers from Hassocks.**—I have forwarded per parcels post a truss of blooms of *Agapanthus umbellatus albus*, of which I have some fine plants in flower now, and which make a fine show; also a few spikes of flower of *Pentstemon Toreyi*. I do not think this is very common, as one does not see much of it.—W. RICHARDSON.

**Erodium Manescavi** is one of the prettiest of the Cranesbill family, and for a long season produces quantities of its rosy red blossoms. The plant is of the simplest culture, thriving well in ordinary garden soil, and is suited to the rock garden or border in almost any position. It is not suited for cutting, and therefore capable of a long display in the garden.

**Prunella Webbiana.**—This kind is worth a more exalted place, if only for its very distinct heads of purplish rose. Not unfrequently the plant is rather roughly treated in the garden, though as we recently noted a large group of it, we were quite favourably impressed by the very

distinct mass of colour that may be turned to good account in many gardens.

**Arundinaria Simoni.**—In April and May I took up a quantity of large clumps of the above named Bamboo, divided them and planted them in more suitable positions, with the result that all the young culms are furnished with striated leaves, showing plainly, I think, that the variety known as *Simoni striata* is merely a sport from the above-named species.—W. O., *Fota*.

**Lachenalia glaucina.**—The curiously formed blossoms of this are of a steel-blue shade, amid which a certain shade of green appears—a rather peculiar combination in a flower, and which appears variable in the different stages of development. The Messrs. Wallace had pots of this curious species at the Royal Horticultural show recently, and we noted the same plant flowering also at Kew.

**Myrtles in tubs.**—I send you a photo of one of our Myrtles, the height of which is 10 feet, width 4 feet. These plants give quite a unique appearance to their surroundings when placed out of doors. I have often wondered why Myrtles are not more grown for standing out on terraces and other places during the summer months. The Myrtle will stand several degrees of frost.—J. EASTER, *Nostell Priory Gardens*.

**Pentstemon Richardsoni** is one of the most showy of this race now in flower, producing long spikes of blossoms, nearly 3 feet in length, of light blue flowers, shaded with red on the upper surface of the corolla. It is a beautiful kind when seen growing in large clumps in the border, and certainly among the most desirable of this extensive group. This plant was very conspicuous in Mr. Ware's group at the Drill Hall recently.

**Eryngium giganteum.**—In place of the prevailing shades of blue so characteristic of the leafage and inflorescence of these plants as a rule, we have in this handsome kind a silvery sheen that in its way is equally telling. The well-established clumps of three years, whether in the border, woodland, or rock garden, of this plant cannot fail to merit approval in any of these positions, particularly the latter, where if associated with bold or rugged rocks they would have a value of their own. In deep sandy loam this plant is safe for several years in succession.

**Salvia bicolor.**—Some handsome bunches of this plant at the Drill Hall last week proved beyond doubt that it possesses a value of its own for the garden. The plant is distinct in many ways from the majority of hardy plants, and where space can be afforded would no doubt prove useful in the border or rock garden. The hardy species of this genus are somewhat vigorous in growth and desirable also. The spikes of flowers are each from 2 feet to 3 feet in length and well furnished throughout their length with blossoms of pale blue and white.

**Nymphaea pygmaea helvola.**—While in every detail of foliage and flower this is decidedly pigmy in character, it is none the less beautiful and interesting. A week ago, from Gumersbury House, Mr. J. Hudson brought several blooms of this almost unique kind to the Royal Horticultural show, and among the more lovely and imposing sorts this dwarf kind, with creamy flowers that have a deep yellow centre, was noticeable. All the blossoms, together with their own foliage, were in each instance exhibited floating in a shallow tray of water—a thoughtful as well as natural method of exhibiting aquatics.

**Campanula Tenoreana.**—This diminutive little species is somewhat scarce in cultivation, though it is one of the prettiest of the dwarf kinds for the rock garden when well grown. The species forms a spreading tuft of heart-shaped and deeply serrated leaves, from which issue the erect flower stems. In place of the usual bell-shaped blossoms, however, we have in this species flowers of about an inch long, distinctly cylindrical in outline, and of a lilac-blue externally. In rather moist loamy soil and a partially shaded position this distinct plant is usually a success, and is

worth attention. The plant is about 6 inches high and comes from Naples.

**Argemone hispida** is a curious as well as beautiful plant, curious in the glaucous, prickly, thistle-like foliage, and beautiful in the large, handsome pure white flowers that are nearly 4 inches across. The species has been called the Prickly Poppy, which name conveys a capital idea of the plant. It is a fine subject for the garden in summer-time, giving it always the warmest positions and a fairly good and deep soil. The plant in its Californian home is said to be perennial, but this is not the case in British gardens where it is best treated as a good annual to be raised early each year from seed.

**Contrasts in shrubberies.**—This may be produced either by foliage or by flowers. As an example of the former, the variegated Tree Mallow gives most distinct effects; it is well worth growing, either singly in a flower bed or combined with shrubs. The Tree Lupine when in bloom is an example of the latter kind of contrast, and is not nearly so often seen as it deserves to be. The flowers of the normal form of it are pale yellow and very abundant. The plant of which I send a photograph was 4 feet high, 8 feet in diameter, and two years old. There is a white variety of it.—W. THOMSON, *Bishops Teignton*.

**Eccremocarpos scaber.**—Here we have a really delightful climber that is not often seen; notwithstanding, it flowers long and freely during the summer months. The plant may not prove perfectly hardy in all parts of England, though in southern and western districts it grows freely and flowers year by year. The best position for it is against a wall facing south or south-west. In just this position a large plant has stood for years, and for some time past its sprays of orange-scarlet blossom have been very pretty, rambling amid the slender twigs of *Jasminum officinale*. It may be freely raised from seed early in the year and planted out in May.

**A blue Wallflower.**—Several times within the last few years I have accidentally come across a purplish-coloured Wallflower growing among batches of the common type, and produced from packets of mixed seed. Perhaps I might describe this "sport" as a purplish or bluish lilac, but it is a very distinct variety, and I should feel obliged by any of your readers telling me where it can be got true, and when and where it originated. In the "English Flower Garden" three old original types are mentioned among "the choice old double kinds," and one of these is the old double purple. Other distinct varieties are mentioned, but the colour I refer to is not common.—FANCER.

**Lilium Henryi.**—Some early spikes of this unique Lily were included in Messrs. Wallace's group at the Drill Hall a week ago. In the cut state as much as the open border a most favourable impression of its value gains ground. We have in this fine species what is so much wanted in really good Lilies for the open garden—a combined vigour of constitution with great freedom of flowering. For such Lilies as are likely to prove of permanent value for the garden there is yet abundant room, and for British gardens generally these must needs possess the vigour, freedom and general hardiness of the speciosum section, which is perhaps the most serviceable in this respect.

**Campanula Hendersoni.**—This, one of the most useful and beautiful of this genus, does not appear to be so well known as it deserves. Though not a difficult plant to establish, we believe it is only rarely that large tufts are secured even in good collections of hardy plants. Some of the largest single specimens we have seen were grown in a rather heavy loam, these being fully 18 inches across, and forming a perfect pyramidal cushion-like tuft covered with large and pleasing flowers. Too frequently this suffers through being in a position much too dry to suit its requirements; and if planted in the rock garden this should be borne in mind, while the

plant somewhat resents a too frequent disturbance at the root.

**Japanese Irises on Long Island.**—A year ago in the home nursery here I was astonished by the profuse blooming of some tufts of Japanese Irises that were growing in full sun upon an exposed gravelly knoll—conditions exactly opposite to those supposed to be essential for these Irises. Recently I saw Mr. J. L. Child's Irises at Floral Park, Long Island. There were several rows of a kind, each row about 500 feet long, the varieties mostly selfs. Two acres of ground were one solid sheet of colour, white, blue, pink, purple and intermediate shades, some individual blooms measuring 10 inches across. Here were Japanese Irises under quite the reverse of aquatic conditions. The soil of Long Island is loose, light and sandy, and all bulbous plants thrive well. Japanese Irises ought to be tried under similar conditions in England.—A. HERRINGTON, *Madison, N.J.*

**Begonia Lafayette.**—This handsome tuberous-rooted kind promises to be one of the finest acquisitions to the so-called bedding section of this family that has ever been introduced. The variety is as remarkable in its erect bushy habit as it is in its freedom of flowering, and not less so for the rich, intense bright crimson of its flowers. These latter are of medium size as compared with the huge blooms one is getting accustomed to, while in colour they bear some resemblance to those of *Davisi* fl.-pl., one of the early double sorts that is scarcely excelled in colour among the best to-day. Planted out it would probably attain from 12 inches to 15 inches high, and if associated thinly with *Dactylis elegantissima*, would make a most charming bed in a rather cool spot on the grass. Quite recently this variety was freely represented at Chelsea, where it is largely grown by the Messrs. Veitch and Sons.

**Lilium Alexandræ.**—At the last meeting of the Royal Horticultural Society Messrs. Wallace, of Colchester, had pot plants of this remarkable hybrid Lily, though, unfortunately, the blossoms were not quite expanded. The plant in question was about 2 feet high, and carried four of its giant horizontally-disposed blossoms. These are perfectly white, with a slight shading of green at the base, the segments remarkable for their great substance. The hybrid character is well depicted in both leaf and stem, the latter partaking of auratum in its formation and colour, while the leaf character partakes of auratum and speciosum, the shortened peduncle of the latter group being rather pronounced, while in their firm substance and horizontal aspect there would appear a touch of *L. longiflorum*. From one of the expanding flowers the huge brown anthers were noticeable, and fully open it is doubtless one of the most beautiful of Lilies.

**Water Lilies.**—July and August are the great Water Lily months of the season, and wherever there are well-established clumps of *Nymphaea caudicidissima*, *N. Marliacea albida*, *N. M. carnea* and *N. M. rosacea* and others, they will now be in great beauty. The little pond here has been gay with flowers since the middle of June, but the largest and most richly coloured flowers come in July. One point in Water Lily culture worthy of attention is the prompt removal of all old flowers, and the more blooms there are cut in the bud or newly-opened stages the more will follow. As cut flowers, Water Lilies of all kinds are well-nigh perfect, and as cut and packed tightly in their own damp leaves they will carry well for long distances and quickly revive and open perfectly when immersed and floated in fresh water in large and shallow bowls. Not only is our small pond a great attraction to Water Lily-loving visitors, but the cut flowers are welcome to our absent friends.—F. W. B., *Dublin*.

**The weather in West Herts.**—Between the 8th and 21st all the days were more or less unseasonably warm, and on the 18th the shade temperature rose to 80°. During the same fortnight the nights, on the other hand, were mostly rather

cold for the time of year. Consequently, the range in temperature has been considerable, and on the 15th it amounted to 33°. The temperature of the soil has fallen somewhat during the last few days, but is still about 4° above what is seasonable both at 1 foot and 2 feet deep. Until the 19th no rain worth mentioning had fallen for nearly three weeks, but since then there has been rain on two days to the depth altogether of about half an inch. The ground, however, still remains dry at a short distance below the surface, no measurable quantity of water having come through either percolation gauge for over ten days. On two days during the week the air remained unusually dry, the difference between the reading of an ordinary thermometer and one with its bulb kept constantly moist amounting to 18°. During the past six days the atmosphere has been very calm, the rate of movement averaging less than two miles an hour.—E. M., *Berkhamsted*.

## PUBLIC GARDENS.

**Open space for Bethnal Green.**—Lord Meath, on behalf of the Metropolitan Public Gardens Association, on Tuesday afternoon, opened to the public the old churchyard and burial ground, 3 acres in extent, of the parish church of St. Matthew, Bethnal Green. Lord Meath said as far back as 1883 steps were taken to acquire the ground. The population of Bethnal Green was 130,000, and altogether there were but 20 acres of public open space.

**Brockwell Park rating appeal dismissed.** The House of Lords (present the Lord Chancellor, and Lords Herschell, Macnaghten, and Morris) heard on Monday the case of the Churchwardens and Overseers of Lambeth *v.* the London County Council. It was an appeal from an order of the Court of Appeal reversing a judgment of the Queen's Bench Division in August, 1895, and it raised the question whether the County Council were rateable as occupiers of Brockwell Park, which was vested in them solely for the purpose of maintaining it for the use of the public. The respondents were assessed for poor-rates in respect of this park as beneficial owners. The property consisted of (besides the laud) a mansion house, a lodge, and a cottage. The Queen's Bench Division decided that the estate was beneficially occupied by the respondents, and they were liable to be assessed. The Court of Appeal, consisting of the Master of the Rolls and Lords Justices Smith and Rigby, reversed that decision, being of opinion that no part of the property could be a source of pecuniary profit to the respondents. Hence the present appeal. The appellants' contention was that the estate was beneficially occupied by the respondents, and that such occupation was not rendered non-beneficial by the fact that the property could not become a source of pecuniary profit to them. The respondents, on the other hand, submitted that the premises were not capable of yielding a net annual value, after the expenses of maintaining and repairing them had been paid; consequently that the park was not liable to assessment. The Lord Chancellor, in giving judgment, said he was of opinion that the park was not rateable. He did not think that there could here be a rateable occupation by anybody. "The public" was not a rateable occupier, and he thought that one sentence disposed of the case. The County Council were merely custodians or trustees for the public, and there was no beneficial occupation by them. They could not use the park for any profitable purpose, and they must allow the public the free and unrestricted use of it. The appeal must be dismissed. The other noble and learned lords agreed, and the appeal was dismissed, with costs.

**Names of plants.**—*G. E. P.*—1, *Mackaya bella*; 2, *Ipomœa Horsfalliæ*; 3, *Allamanda violacea*; 4, *Rudbeckia californica*; 5, *Anthemis nobilis*; 6; Shrivelled beyond identification.—*J. R. Droop.*—*Alostromeria aurantiaca*.

# THE GARDEN.

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## ORCHARD AND FRUIT GARDEN.

### TREATMENT OF PEACHES WHEN STONING.

PEACH trees not unfrequently drop their fruit when stoning, this evil being much more common in early and second early houses than in later ones, when the crop comes on from start to finish under more natural conditions. Opinions vary as to the safest temperature at which to keep the house during this somewhat trying time, few caring to adopt a higher one than 65° during hours of darkness, others regarding 60° as a safer figure. I think a good deal depends on the outside temperature, a few degrees above the latter doing no harm—when frost-free, genial weather prevails—keeping as near to it as possible when the open air thermometer falls below freezing point. Early Peach houses, like early Melon houses, should be furnished with plenty of hot-water pipes, so that the desired night heat can be maintained without over-pressure, the excessive pipe heat destroying the needful atmospheric moisture, a great drawback to the trees at any time, but especially when the fruit is stoning. Many gardeners court failure by leaving far too many fruit on the trees, thinking that this is a safeguard in case of falling during stoning. Greater safety would, however, be secured by using a freer hand when the fruits were in an earlier stage, although I do not agree with those who advocate reducing the fruit to the required number previous to stoning, and I think the majority of gardeners will agree with me. If the extra thinning out of wood which the trees may require is not completed before stoning commences, I think it is best to postpone it till this is completed, as using the knife freely at that stage is apt to give a check and cause dropping. Too early closing of Peach houses on hot sunny days just at this period is injurious, the fruit being practically at a stand-

still. Defer final closing till a little later in the day, taking care that the foliage gets dry by nightfall. The bad practice of having wet foliage during hours of darkness is more dangerous still when the fruit is stoning, wet trees and a lowered temperature for several nights being quite sufficient to cause the fruit to turn yellow and drop. Some people have said that it is a bad plan to water the borders when the fruit is stoning, but this, I think, is quite imaginary, as trees growing in pots and tubs have to be watered almost daily. It is a good plan to thoroughly soak the borders just previous to the fruit stoning; they will then with a mulch go on until swelling again commences with further moisture, unless very limited in width and depth. Red spider on the leaves, caused by insufficient use of the syringe previous to stoning, is a fertile cause of dropping.

J. CRAWFORD.

**Strawberry Dr. Hogg.**—In the note on "Prolonging the Strawberry Season," "M. W." (p. 35) does not notice this variety. It has been very satisfactory here, one-year plants throwing a large quantity of fruits of excellent quality. How it would behave on a light soil I cannot say, but on heavy land it does capitally, the only fault being the unfinished points of the fruit. Latest of All, on the other hand, having much less foliage ripens better, but is not so late as the variety named above, the fruits of which are still (July 17) good in the open garden.—SUFFOLK.

**The Strawberry beetle.**—The Strawberry beetle appears to be more troublesome this summer than usual. In some parts of East Anglia, notably near Great Yarmouth, this pest has completely destroyed the entire crop. The difficulty with most people is to find a plan of extermination, as the beetles carry on the greater part of their work during the night, and treading about amongst the plants at random would soon spoil the fruit. One grower, however, seems to have hit on a plan of reducing the beetles by a very simple method. A lot of jam jars were obtained and a little lemon water put into each of them, having previously sunk them in the ground

to the rim and covered each jar with litter. Another and a still more successful remedy of the same grower consisted in placing some hens in coops with chickens near the beds. These soon cleared off the beetles and a host of other insect pests.—GROWER.

**Black Currants.**—These are almost a failure in many cottage and large gardens in this neighbourhood, but I have had a capital crop of fine fruit. In a measure I attribute this to thinning the wood at the time the fruit is being gathered. Any boughs that are in the least crowding their neighbours are cut out entire with the fruit on and taken to a shed, where the latter can be easily and more quickly gathered. This allows the sun and air to reach the shoots left, ripening them thoroughly and enabling the later foliage to grow to its full size, an important point in all fruit culture.—R., Suffolk.

**Peach Prince of Wales.**—At page 35 this Peach is mentioned as being a good one for growing on open walls. I can also recommend it for culture under glass. I have had a tree of this variety in a lean-to house for the last twelve years, and it has never missed a crop. The flower is small, but the fruit always sets thickly, much thinning generally being needed. The tree is not forced, but allowed to come on gradually, the fruit usually ripening about the middle of August. The fruit is very highly coloured where exposed to the sun and the flavour is excellent. I should say Prince of Wales is one of the most certain varieties in cultivation, the tree being in no way a strong grower, but making under ordinary care short, well-furnished growths. I believe it is largely grown for market, a pretty sure proof of its value.—J. C.

**Melon Eastnor Castle.**—"A. W." does well to draw attention to this old Melon. Some gardeners of my acquaintance think it rather capricious, and certainly it does require good cultivation, but it well repays any extra trouble. I have found it rather liable to scorch if careful airing is not practised and a little air admitted early in the morning. It certainly is a grand Melon, and no mistake can be made in growing it where first-rate flavour is a consideration. Another good old Melon, now almost discarded, is Heckfield Hybrid. A few gardeners still cling

to it, and certainly, all points considered, it takes a lot of beating. It is one of the very best of setters, and that, too, in a lower temperature than many sorts like, and a full crop may generally be relied upon. The finest crop of it I ever saw was from plants grown in pots and plunged in a bed of leaves in small lean-to houses in Kent. Many sorts that do not always set well when planted out are fertile enough when grown in pots.—C. C. H.

**The Loganberry.**—In last week's GARDEN this new fruit was noted as having received an award of merit. I am able to say something concerning it, having grown and fruited it this season. With me the fruits, which are very similar to a Raspberry in shape, have larger pips and are darker in colour, the flesh being firm, as though they would travel well, and the flavour briskly acid, there being plenty of juice. It should make a capital preserve. I received the plants last autumn, and instead of planting out at once, I potted the plants up and wintered them in a cold frame, putting them in the open garden in a sunny position in spring. A few fruits have been produced and stout canes thrown up, somewhat like those of a Raspberry, but more prickly, and by the number of fruits which the plant bore this season, the yield ought to be an abundant one in 1898. Increase is done by division of the roots, and if this is done in autumn and the pieces grown on in small pots and planted out in March, the plants stand the best chance.—J. CRAWFORD.

#### THE LONGLEAT MUSCAT GRAPES.

If the Longleat Grapes are not so much in evidence as they used to be, those who pay a visit to the famous vinery in which they are grown will find that there are no signs of any decadence in the Vines, or of any want of ability to manage them properly. On the contrary, it is doubtful if they were ever so uniformly good as they are this season. The central portion of a grand span-roofed structure is wholly devoted to the growth of Muscat of Alexandria Grape. This division measures 90 feet in length, and is 30 feet wide. The roof is completely occupied by four Vines only, and these have been planted about twenty-five years. These four Vines are planted one in each corner, and trained along the front till they meet each other. From these main stems, each of which at 2 feet from the ground measures close upon 18 inches in circumference, rods are taken up the roof at intervals of 6 feet. These have been gradually extended till they have reached the opposite side, so that the trellis is now actually covered with stout rods 3 feet apart only. An easy curve is given the rods, and nowhere are they less than 18 inches from the glass. Thanks to this arrangement and to good cultivation generally, not a burnt or scalded leaf is to be seen, and no trace of red spider could be found, but all the leaves are in perfect condition. Curiously enough, neither the leaves nor the lateral growth are ever large on these Longleat Vines. I have paid frequent visits to this vinery during the past fifteen years, and each season have been struck with the comparative smallness of both the young wood and the leaves, and the reasons for this have never been satisfactorily explained. But if the wood and foliage are small this cannot be said of either the crop or the individual bunches. There is a bunch to about every 18 inches run of rod, all are on the large side, and perfectly furnished with large berries which only require a few weeks more sunshine to finish them properly. Scores of bunches are not less than 5 lbs. each in weight, and some might be found equal to scaling 8 lbs. Altogether there cannot be far short of one ton of Grapes in that compartment, and Mr. J. Trollope, the head gardener at Longleat, has every reason to feel proud of what he has accomplished. I ought, perhaps, to add that the roots are believed to be wholly inside the house, but this cannot be vouched for owing to the roots from the Vines in an adjoining division having once forced their way through the brickwork of foundation wall and spread far and

wide before it was known they had escaped control. The soil surrounding the Longleat vinery is of a heavy clayey nature, and Vines rooting into it are prone to slanking of berries, consequently Mr. Trollope keeps the roots in the inside border as much as possible. No great amount of manure of any kind is applied to the borders, but plenty of liquid manure and water are given.

W. IGGULDEN.

#### LATE STRAWBERRIES.

NEVER have late Strawberries been more appreciated than this year, and though the season was one of the shortest owing to heat and drought, I am now gathering Latest of All and Oxonian from young plants on a north border. British Queen has also done well this year on a north border under a high wall, the plants having been put out in the spring of 1896 from pots, being too small to plant out when potted up the previous autumn. Those who value quality in Strawberries may with advantage grow the British Queen and Pine varieties in this way, as they make runners rather sparsely, and when procured from fruiting plants are not obtainable in time to plant for fruiting the first season. Grown thus, it is well to remove the weak trusses, which show soon after planting. Latest of All treated as an annual gives grand fruit as regards size, but treated as advised for the Queen it is very fine, and the fruit is produced in quantity. These remarks are equally applicable to several of the Pine family. Oxonian does so well, it is not necessary to refer at length to this variety. Unfortunately, it is of poor quality, but its lateness makes it valuable. I usually plant it early in August for the following July supplies. This year our season will have been five weeks; not a bad one when the heat and drought are taken into account, and seeing how soon the mid-season and early kinds also were over; without late fruiterers it would have been a short season indeed. This will induce me to plant more late varieties. I am aware in wet seasons, if late plants are at all thick, the fruits decay badly. I am not an advocate for planting too closely, and I think there is no need to grow old plants—in fact, even the Queen and Pine family should be cleared after the second crop. There is a great gain in early planting, as the plants, becoming established, winter so much better.

G. WYTHES.

**Strawberry Monarch.**—"W." (p. 35) states this is of poor quality in the open. I have not found it so; indeed, though it cannot be compared to a British Queen, it is superior to some of the older varieties, the flavour of which is rarely questioned. For forcing I do not recommend it. As a midseason kind in the open it is very good. I fail to see the objection to Royal Sovereign. With me it does not lack the quality I have heard several growers complain of, and I am this season adding another 1000 to the number for early work. I admit the fruit must be gathered before it gets too ripe for travelling or sale. It is my mainstay for forcing and first crop in the open, and the plant being so robust does well in our poor soil. For flavour "W." would do well to give the newer Veitch's Perfection a trial.—G. W. S.

**The Strawberry of the year.**—My remarks apply to the new Veitch's Perfection, the result of a cross between British Queen and Waterloo. This new kind was staged on a recent occasion before the fruit committee of the Royal Horticultural Society, and every member was delighted with its quality. I am not a great lover of the Waterloo type; it is too dark, and in hot, dry seasons soon suffers. Another point, it is none too free the first year. Fortunately, Perfection has not the failings of Waterloo. It is not a gross grower, is a grand fruiter the first season, and a superb fruit. Messrs. Veitch are to be congratulated on giving Strawberry lovers such a reliable variety. I do not advise it as a forever, not having given it a

trial, but in a season anything but good for Strawberries it has done well. Of course, it is early to state how it will thrive in all soils, but so far it is happy in one not the best for Strawberries.—G. WYTHES.

**Peas on Apricot borders.**—For many years I have endeavoured to give Apricot roots a free run, and on no account have I planted directly on the roots, allowing a 4-feet space from the wall. At p. 4 Mr. Crook advises sowing Peas on the top of the Apricot roots. I do not think this advisable if directly over the roots as stated. Possibly in Mr. Crook's locality Apricots do well. Mine are none too vigorous, and I could ill afford to rob them by planting or sowing vegetables directly over them. Few fruit trees root so near the surface as Apricots. Though one often sees grand fruit trees with the roots under a hard gravel walk, their well-doing is because the roots are cool and undisturbed.—M. W.

**Raspberry troubles.**—Raspberries as a rule do so well in various soils that it is somewhat unusual to see general failure. Yet at Clendon Park, the gardener, Mr. Blake, in spite of all he can do to get rid of the trouble, has to see his canes die wholesale, so that where the winter canes indicate a good product in the summer, it is found that no leaves are put forth in the spring, and three-fourths are then dead. That result is specially the case in the third and fourth years after planting. Later, were not other plantings made, the breadths would be absolutely dead. That the soil, which is of a fairly retentive nature on a deep bed of chalk, is at fault there can be no doubt, and frequent planting of young canes on fresh soil seems to be the only alleviation. Things are almost as bad at Bramley Park. Possibly some reader may be able to furnish some remedy for this trouble.—A. D.

#### THE APPLE CROP.

If my own fruit garden might be taken as a fair sample of what has happened all over the country, the Apple crop of 1897 would have to be classed as a complete failure. Fortunately, it is only in comparatively low positions where the whole of the Apple blossom was destroyed by spring frosts, and it will be found that there are better crops in many districts than thought possible at one time. It is true that much damage was done by frost to the blossom on trees situated well out of the valleys, but it was so very abundant and in some instances most robust, that enough survived to give a fairly heavy crop of fruit. In my rounds in this and adjoining counties (Somerset and Wiltshire) I have been pleased to see some orchard trees quite heavily laden with fruit; but, unfortunately, the majority of the orchards are old and situated in valleys, and as a consequence of this want of forethought the supply of fruit will not be equal to local demand even. It is worthy of note that fruit and forest trees, notably the Ash and Oak, were severely damaged by frost in the valleys, but escaped on ground not more than 50 feet higher. Surely this ought to be a lesson to those contemplating planting more fruit trees next autumn. The famous Toddington orchards are arranged some on low ground, others in quite high positions, and the remainder midway between them. If I am rightly informed, it is the intermediate sites that answer best in most years, but I cannot say how they have succeeded this season. Once more shelter trees have done good service, but it is only on the east side where this is apparent. Tall trees on the east side of an orchard shade the fruit trees in their immediate vicinity from the early morning sun, just long enough for the frost to go out of the blossoms slowly. It is the rapid thaw that does the mischief, and those who afforded a light protection to their garden trees have

good reason to be pleased with the result. The blossom on these protected trees was frozen hard, but the shade from bright morning sunshine saved much of it. It is also worthy of note that in some gardens where bush trees are bare of fruit, those horizontally trained are carrying moderately good crops.

Some varieties when in bloom stand frost better than others, but none that I am acquainted with has proved so reliable as the old Keswick Codlin. Not only in these districts, but round London and, in particular, Gammersbury way, the Keswick Codlin is carrying the best crops, and it is a fortunate circumstance that this old favourite has not been wholly superseded by Lord Sutherland, Lord Grosvenor and other large Codlins, which are the most profitable in some seasons. Ecklinville, again, is going out of favour with market-growers owing to the softness of the fruit, but garden and small orchard trees of this reliable sort are cropping so well this season that they will not be discarded in a hurry. It is one of those varieties that never quite fail, and which produce enormous crops in some seasons. Warner's King—a variety authorities agree in praising—has once more justified the encomiums bestowed upon it. Many garden trees of it are carrying good crops of large well-formed fruit, and this will be fully appreciated. Cellini Pippin is not a variety I should consider good for resisting frost when in flower, but, all the same, I know where there are garden trees of it very heavily laden with fruit, while Cox's Orange Pippin and Margil near at hand have not a single well-formed fruit on them. Garden trees of Blenheim Pippin are also failures this season, but there is a good sprinkling of fruit on many fine old standards. The trees of Bismarck that have come under my notice flowered too profusely, and not many fruits are the outcome. So also did the deservedly popular Lane's Prince Albert, yet some of the low standards are carrying half a crop of fruit. I could point to trees of this invaluable Apple that have not really failed once during the past thirteen years, and this cannot be said of any other variety in the collection. When the reports of fruit crops come to be analysed, it will be found that one or two varieties of Apples will stand out pre-eminently as being the most profitable in a bad season.

W. I.

#### MELONS AT LONGLEAT.

MELONS are grown to perfection in the gardens at Longleat, Wiltshire. Mr. J. Trollope being quite as successful with them as the two well-known gardeners who preceded him. The extension system is adopted, four plants occupying the same amount of roof space as a dozen or more do in most other gardens. Instead of the lateral shoots being stopped at the second or third leaf beyond the first fruit that shows on them, they are freely and early thinned out and trained horizontally to a distance of 4 feet, sometimes more than this, before they are topped. The bulk of the crop is produced by the sub-laterals or breaks from the laterals, and not all at once, but in succession, so that it is nothing uncommon to see fruit in all stages of growth on the same plants. According to most gardeners' views, the disadvantages attending the extension system of growing Melons more than outweigh the advantages. I am not so sure about that. No doubt a greater variety can be grown by planting thickly, but who cares for so many sorts? As a matter of fact, not more than one good green-fleshed and one scarlet-fleshed variety need be grown in any garden. The cultivator should know his variety and its requirements or treatment well, and then there would be fewer failures. Mr. Trollope laughs at the idea of losing plants from canker just when a good crop is set on them, and if what I have seen

at different times at Longleat is any criterion, canker may simply be defied. The plants are put out in a nearly solid bed of strong fibrous loam cut thickly, and a fresh wall of turf is added when the roots have taken full possession of that they were first planted in. Instead of being put together in a rounded heap, in which form the water is thrown off only too effectively, the soil immediately about the collars of the plants only is raised higher than the rest and kept constantly dry—that is after the plants are 2 feet in height—while the main portion of the loam is quite flat, absorbing most of the water applied to it accordingly. In this respect the Melons are treated similarly to and receive quite as much water as Cucumbers growing in adjoining houses. As a consequence the soil is completely over-run with a network of root fibres, the surface being quite white with them. There is no premature loss of lower leaves owing to want of light, no canker to be alarmed about, and no drying off at the roots either as a preventive of fruit cracking or because the crop is ripening. Need any surprise be expressed at the solidity or high character of the fruit produced under such conditions? It is the half-starved plants that fail to produce heavy crops of superior fruits, and it is only by high culture, somewhat on the lines I have briefly sketched out, that a succession of handsome, richly flavoured Melons can be had from a single plant.

W. I.

**Strawberry Latest of All.**—I saw this variety fruiting in an almost wonderful way in Lord Onslow's garden, Clandon Park, Surrey, just recently. Not a fruit was left on any other variety, but this one was loaded with fine fruit. It has been recommended to be grown on a cool north border, where doubtless it would be later still. In this case it was fruiting in an open quarter. Whilst no doubt the plants like a deep soil and a cool situation, it is evident the fruits need plenty of sunshine to ripen them, as they do not colour right out, but resemble greatly one of the parents—British Queen. The breadth was at its best on July 10, but there was plenty of fine fruits on July 15. The one-year-old plants had the finest fruit and the two-year-old plants the heaviest crop.—A. D.

**Standard bush fruits.**—The standard Gooseberries some 3½ feet to 4 feet in height, recently exhibited at the Drill Hall by Messrs. Veitch and Sons, were worked upon Ribes aureum stocks. These are easily obtained of a good length from cuttings. The height mentioned, however, seems needless, as from 2½ feet to 3 feet would be much better. No doubt Red Currants would bear similar treatment, and the fine La Versailles makes a capital standard on its own roots if kept hard pruned. In no case should such heads of Gooseberries or Currants be allowed to extend unduly. Kept close home and bushy they are first-rate, and produce very fine clean fruit. The heads are easily protected with nets or thin canvas. Blackbirds and thrushes usually attack fruit from below and not from above.—A. D.

**Work amongst Strawberries.**—The Strawberry season, so far as the early and midseason kinds are concerned, being at an end, the plantations should, in all cases where they are to be retained for another year, be put in order without delay. If layering was done when advised and the necessary numbers obtained, the runners will either have been severed or be ready for severance from the parent plants. When the pots are removed the way is then clear for dealing with the plants as their condition may demand. Those set out last autumn will merely require trimming up, which will simply mean the cutting away of the oldest leaves and divesting them of surplus runners. Older plants carrying more foliage will need a more severe trimming, and in all cases where the leaves have become badly infested, either with mildew, red spider or any other fungoid or insect pests, the plants, if worth retaining, had better have the whole of the foliage cut away. This should at once be removed and burnt to prevent the insects or disease from

spreading. The quickest way of dealing with plantations in such a plight is to mow the leaves off with a scythe, only care should be taken to see that the crowns do not become injured by cutting too low down. If this is done at once the plants will then make plenty of new foliage, which will become fully developed and hardened by the end of the autumn. After the plants have been trimmed up, the surplus runners cut away and the ground hoed, both to lighten the surface and to get rid of weeds, spread a mulch of well-rotted manure about 2 inches thick between the rows. This will induce the plants to make an abundance of new roots and foliage, which in turn lead to the building up and development of good sound crowns, and thus render the production of heavy crops of fruit another season all the more certain.—A. W.

## ORCHIDS.

### NOTES ON PESCATOREAS.

THESE singular and interesting Orchids are not so easy to cultivate as the usual run of species. The first point to notice is their having neither pseudo-bulbs nor large thick fleshy foliage to sustain them during the resting season. They require as much rest as a Dendrobium, though it is rest of a different kind. No attempt must be made to dry them off, or probably it will lead to their disappearance altogether, but a slight diminution in the water supply, combined with a little more air and rather lower temperature, causes a cessation of growth and a general hardening of the plants. This cool treatment should be led up to a certain extent by exposure to more light when the little tufts of leaves are complete and the flowers past. During the time the plants are in active growth the best position is a shady one in an intermediate temperature where moisture is abundant and a fair quantity of light is allowed to reach them. A bright, glaring light is wrong, as the foliage cannot stand it; a dense shade all the year round, on the other hand, produces growths so poor in texture, that the least check in winter causes them to be attacked by spot or to lose their foliage. If the Cattleya house is a large roomy structure and one not likely to part with its moisture readily, this makes an ideal place for them if the requisite shade can be afforded. But if the intermediate house is at all inclined to be draughty or dry they are far better in the closer and warmer atmosphere of the East India house. The growth will be more free and the plants in every way more satisfactory. With regard to the treatment of the roots, the most important point is cleanliness. In a mixture that runs together and forms a heavy inert mass they are never long-lived, yet they are of a strong fleshy character and want feeding. Disturbance is their bane, so when a renewal of material is required it should be carefully done and with a view to its lasting.

Pescatoreas thrive well in baskets or flat pans, and even in pots if the drainage is thorough, the layers of crocks being well protected in every case by some rough Moss. Have good fibrous brown peat prepared by shaking out all sand and earth, and clean, freshly-gathered Sphagnum Moss, plenty of clean crocks and charcoal to keep the whole open, and, if it can be obtained, a little of that nice silky loam so much looked after by gardeners. This makes a medium that, while holding abundant moisture for the need of the plants, will not become sour or water-logged. A fair margin may be left around the plants, as they make rapid progress when healthy and strong, and ought not to require another shift for three years. Before

placing in the new material be very careful that none of the old sour peat is left. It is better by far to shake them right out and to wash every particle of old material away than to leave anything likely to contaminate the new material. The plants need not be elevated much above the rims of the pots or baskets, and the new compost should be kept moderately firm about the roots, pressing it in with a blunt dibber. The likeliest time to repot is when the growths are getting well away in spring or early summer before they commence to root on their own account. Water must be judiciously applied until the roots are again active, when a rather free supply is necessary until the time mentioned above.

**Stanhopea oculata.**—This, one of the brightest of the Stanhopeas, is now in bloom. The blossoms are not so large as those of *S. grandiflora* or *tigrina*, but more showy than those of either, owing to the large spots of purplish lilac on a yellow ground. Fleeting as any in the genus, it seldom lasts over a week, but strong plants are very beautiful meanwhile. Grow it in baskets of peat, Sphagnum, and charcoal, with a little loam fibre or leaf-soil, and place some large lumps of charcoal over the bottom to allow the scapes to descend freely. Water abundantly overhead in summer and at the roots.

**Oncidium prætextum.**—A good form of this species is as nice as anything in the *O. crispum* section, the blossoms being prettily marked, freely produced, and slightly scented. Its culture is not difficult, but sometimes it has a tendency to grow out of season, which should, if possible, be checked by ripening up the growth well in autumn and endeavouring to rest it naturally. The compost for *O. prætextum* may be of an ordinary description, and a thin layer only is needed, either over good drainage in a basket or arranged on a raft. It does well in an intermediate temperature, as it is a native of Brazil, whence it was introduced in 1876.

**Cattleya Eldorado.**—This is a distinct and pretty *Cattleya*, not so large as some of the labiata section, but yet very telling. It flowers upon the young pseudo-bulb as a rule, but I have known it rest in sheath for a month or two and then send up a flower after the manner of *C. Percivaliana*. The sepals and petals are pale rose or lilac, much lighter in some forms than others, the distinctive character of the lip being a yellowish or orange area, bordered with white. The front portion is crimson-purple, and it is prettily fringed all round. *C. Eldorado*, though not so strong as *C. Mossia*, presents no particular difficulty in its culture. The growth should be gently excited in spring, and kept going until the pseudo-bulbs are well finished, and then if possible kept dormant through the winter. It is a native of the Rio Negro district, and though imported by M. Linden in 1865, was not much known until about a dozen years later.

**Cattleya Hardyana.**—The parentage of this lovely natural hybrid having been proved, it is desirable that those having the convenience should raise it artificially at every opportunity. Its parents, *C. gigas* and *C. Dowiana aurea*, do not, it is true, always bloom at exactly the same time, but they do occasionally, and even without this the pollen of *C. gigas* may be easily kept a little while and still retain its potency. Beautiful indeed is the progeny of these two splendid *Cattleyas*, and free blooming and strong growing as well. As is now well known, it first appeared in the collection of Mr. G. Hardy, of Timperley, after whom it was named, and soon after it appeared in many other places from imported batches of *C. gigas*. Its affinity to the species mentioned above led Orchid growers to think it a natural hybrid between them, and that this view was correct, Mr. Norman Cookson's artificially raised plants—exhibited last autumn—proved. The best form of *C. Hardyana* I have seen was nearly 8 inches across the sepals and petals, bright rosy

magenta, the lip, a most lovely feature, being deep crimson-purple, veined with gold. The plants thrive in the warmest and lightest part of the *Cattleya* house, and should be well grown in early summer, ripened and kept dormant after blooming.—H. R.

**Spathoglottis aureo-Vieillardii.**—This is a remarkable and somewhat variable hybrid raised by Mr. Seden. It is the result of crossing the two species from which the name is derived. The sepals are each about 1½ inches in length, pale yellow, suffused with purple, and thickly covered with rich purple spots. The petals, of about the same length as the sepals, are about 1 inch in breadth, the ground colour similar to that of the sepals, but more densely spotted with larger purple spots. The front lobe of the lip is rich crimson-purple, shading to yellow and thickly spotted with brown, the side lobes yellow, spotted with purple at the apex, white spotted with violet at the base. It is well deserving of attention from lovers of this beautiful species of Orchids. It is now in flower in Messrs. J. Veitch and Sons' nursery at Chelsea. It requires the treatment of the warm house, with a humid atmosphere and an abundance of moisture while in active growth.—STELIS.

**Saccolabium cœleste.**—This is a dwarf and very beautiful species, the pretty blue-tinted blossoms plentifully produced upon the spikes having a distinct character. It is fairly stout, and the spikes occur at this season from near the apex of growth, each flower being about 1 inch across, whitish, tipped with blue. To grow it well, a large, moist, tropical house is most desirable, the atmosphere in such structures suiting all the distichous section of Orchids better than that created by a low, narrow house, where the first upward move of [the ventilator takes out most of the moisture. It does well in open wood baskets, Sphagnum Moss and plenty of roughly broken charcoal suiting it well as a rooting medium. The safest time to rebasket the plants is about March or April, and in doing so it must be borne in mind that few plants like disturbance less. For this reason it is wise to give a basket large enough to keep it in health for several seasons, and when a new one becomes necessary take the old one to pieces as carefully as possible, syringing away the old decayed Moss and placing the pieces of wood that the roots have attached themselves to into the new basket. While growth is active and the roots are also growing freely the Moss should never be really dry, but a considerable reduction must be made in the water supply during the winter. *S. cœleste* is a native of Siam, where it is found growing in almost unshaded positions, consequently plenty of light must be allowed.

#### ONCIDIUM INCURVUM.

The colours of this charming little *Oncidium* are distinct and telling, the long arching spikes of flowers being very useful for cutting. On the plant, too, they make a pretty show. The ordeal of standing week after week in the dry, vitiated air of living rooms is too much for most Orchids, and though a little of it does not hurt *O. incurvum*, it is not wise to leave the plants indoors too long. As far as the flowers themselves go, they may, if the plant be strong and healthy, remain on until they begin to fade, always provided, of course, that water is duly supplied to the roots and the atmosphere is right. Weak, badly-rooted plants, on the other hand, should have the bloom spikes taken off soon after these come to maturity, for they are a strain on the plants for a long time while forming. The spikes appear at the base of the last-formed pseudo-bulbs and grow a yard or more in length, the flowers elegantly yet closely set upon small side branchlets. The sepals and petals are small and narrow, creamy-white with rosy-purple bands, the lip white, and the entire flower is seldom more than an inch and a half across. *O. incurvum* is a native of Mexico, and while thriving fairly well under cool treatment,

produces larger pseudo-bulbs and longer spikes in a rather higher temperature. Too much heat, on the other hand, is very injurious. It will do well in a similar temperature to that required by the Mexican section of *Lelia*, but likes more shade. The roots are not large, but are plentifully produced; consequently, a compost of medium quality may be given. The plants do well in pots, these being well drained and large enough to allow of 2 inches at least around the plant. Large old specimens do better in shallower receptacles, the pans pierced with holes around the sides suiting them well. Such plants require careful handling when renewal of the compost becomes necessary, as the best roots are often on the outer portion of the ball, and a lot of older, partly decayed ones further in. There is only one thing to be done, and that is careful hand-picking of the decayed parts, as far as these can be got at, without damage to the younger healthy ones. Its season of growth and rest is usually well defined, and, as a general rule, no special treatment is necessary, but it is an advantage during late autumn, after the flowers are past, to keep them in a light and moderately sunny position.

**Phalænopsis Ludde-violacea** is a distinct hybrid raised in Messrs. Veitch's nursery by crossing the two species indicated in the name. It is apparently of good constitution and very free-flowering. A plant with three spikes and six expanded flowers was recently noticed in bloom in the Chelsea nurseries. The sepals and petals are deep rose, marbled with white, the lip rich crimson in front, with several slightly raised hairy ridges, the side lobes rose, shading to yellow at the base.—S.

**Phalænopsis Vesta.**—This lovely hybrid is the result of crossing *P. Aphrodite* and *P. rosea leucaspis*. It is in the way of the beautiful natural hybrid *P. intermedia*. The sepals and petals are white, shaded with rose, the front lobe of the lip deep purple, shading to yellow, and spotted with brown at the base, the side lobes rose-purple at the apex, white at the base, where it is thickly spotted with rich brown. A strong plant carrying a spike of seven flowers I lately noticed.—S.

**Phalænopsis Hebe.**—This, the result of crossing *P. rosea* and *P. Sanderiana*, differs principally from *P. intermedia* and *P. Vesta* in its broader and more highly-coloured sepals and petals, which are white, heavily suffused with rose over the basal half. The lip, similar in character to that of *P. intermedia*, is purple in front, shading to yellow and spotted with reddish brown at the base. It is a free-flowering variety and of good constitution, requiring the usual *Phalænopsis* treatment and should be grown suspended from the roof.—S.

**Miltonia Bleuana virginalis.**—This distinct and lovely hybrid differs from the typical forms raised by M. Bleu, of Paris, in that it has almost completely lost the colouring usually seen on the disc of the lip and at the base of the petals. The sepals are pure white, petals white, with a very slight indication of rose at the base, the lip upwards of 2 inches across, white, with a superb purple disc. It is the result of crossing *M. Roezli* and *M. vexillaria*. A strong plant of this variety was recently in flower in the collection of Mr. E. Ashworth, Harefield Hall, Cheshire.—STELIS.

**Cattleya Aclandiae.**—Growers often make the mistake of treating this *Cattleya* the same as a strong-growing *C. labiata* or some similar kind. This is quite wrong, for though block treatment is decidedly too poor to obtain the best results, it is infinitely better than stifling the roots under several inches of peat and Moss. It is never happier than on a raft with a little compost about the roots, just enough not to prevent the air from playing freely about them. Grow it thus in an intermediate house, and let it have its own way in regard to resting or otherwise, and it is usually satisfactory.

TREES AND SHRUBS.

KALMIAS.

AMONG the dwarf evergreens there are few that rank higher in merit than the Kalmias. There are altogether seven species known, but of these only three appear to be in cultivation, all of which are valuable as garden shrubs. The genus is purely an American one, extending from the arctic regions in the north as far as Cuba in the south. The tallest growing of the three species here described—*K. latifolia*—is commonly known as the Mountain Laurel, and is one of the chief favourites among the many plants suggested for the national flower of the United States. The name *Kalmia* was

*sideratum*, and this is why deep trenching is recommended. In hot, sandy soils the ground should be removed to a depth of 2 feet and replaced at the bottom with the best of the natural soil mixed with a heavier loam, filling the upper part with a mixture of peat, leaf-soil, and loam. This may be a troublesome and perhaps costly business, but it is cheapest in the end, and saves much labour in watering during hot summer weather. All the three species here mentioned ripen seed in this country, by means of which they can be increased. Layers and cuttings may also be employed, but seeds are preferable.

Both *K. angustifolia* and *K. latifolia* may be used for forcing. The plants should be potted up at the beginning of winter, and may be brought into the forcing house at intervals to

origin, and, according to Loudon, is a native of the mountains of New Jersey. It is easily distinguished by its larger, oblong or ovate leaves, which almost suggest a small-leaved *K. latifolia* in their glossy green colour and firmness of texture. They are produced in whorls of three or four leaves at each joint, and the whole shrub is of taller, more robust growth.

*K. A. VAR. NANA* is also a distinct and very pretty plant. It is of close dwarf growth, forming a neat dense bush 1 foot or less high, and useful as an edging or for a front place in a group of the taller Kalmias.

*K. A. VAR. RUBRA* has flowers in which the purplish tinge of the ordinary form gives place to a purer red. Of the several varieties it is the richest in hue.

*K. GLAUCA*.—This species differs considerably in general aspect from the other two, and compared



*Kalmia latifolia*. From a photograph by Mr. F. Mason-Good, Winchfield, Hants.

given to these shrubs by Linnaeus in honour of Peter Kalm, a pupil of his, and afterwards a professor of botany in Sweden. He travelled in Eastern North America about the middle of the last century. The Kalmias belong to the ericaceous family, the flowers being rather flat and saucer-shaped and borne at, or near, the ends of the previous season's branches. They require the same conditions under cultivation as the great majority of their allies—the so-called "American" plants. A soil of a peaty nature is best, but in gardens consisting of pure loam they may be grown well by trenching deeply and mixing plenty of well-decayed leaf-soil and as much peat as can be afforded with the top spit. They have the same antipathy to lime at the roots, which renders the cultivation of so many ericaceous plants in chalky soils a difficult and expensive matter. A cool and continuously moist soil is an important de-

provide a succession, but slow and gentle forcing is necessary.

*K. ANGUSTIFOLIA* is a very pretty dwarf shrub growing from 1 foot to 3 feet high, which flowers during June. Its leaves are oblong and blunt and from 1 inch to 2 inches long. The name *angustifolia* (narrow-leaved) is only appropriate as distinguishing the species from the larger, broader-leaved *K. latifolia*. They are, as a rule, produced in threes at each node. The flowers are of a purplish-red (but of different shades), each a little under half an inch in diameter, the corymbs being produced in the leaf-axils near the ends of the shoots, sometimes extending several inches downwards from the tips and forming a showy cylinder-shaped mass of blossom. It is a very free-flowering plant. It was introduced in 1736 from Canada, but extends from there southwards to the hills of the Carolinas. Of the several named varieties in cultivation the most distinct is

*K. A. VAR. OVATA*. This is a form of natural

with either of them, but especially *K. latifolia*, is poor and scanty in appearance. Out of flower it is by no means so handsome a shrub. The leaves are almost sessile and about an inch long; they are ovate-oblong, but often appear narrower on account of the edges being curled under, and are mostly borne in pairs at each joint, but occasionally in threes. The revolute margins of the leaves and the glaucous white colour of the under-surface render the species easily distinguishable at any time. The flowers are reddish-lilac, each over half an inch across, and produced in terminal corymbs. The species was introduced from the United States in 1767. It is in flower, as a rule, early in April, and is thus two months or so in advance of its two fellow species.

*K. LATIFOLIA*.—This is much the largest of the Kalmias, and may frequently be seen 6 feet or 8 feet high in this country, whilst in the Southern Alleghany Mountains it is said occasionally to attain a height of 20 feet. It is a very handsome

shrub both as regards its foliage and blossom, and in places where the conditions suit it there are few evergreens of greater beauty and value. Among the many fine things that may be seen at Dropmore are large spreading bushes of this *Kalmia* in perfect health. The leaves are alternate and not produced in whorls, as in the other two species, although they are clustered towards the end of each growth: they are of a dark lustrous green and taper to a point at both ends, averaging about 3 inches in length by  $\frac{1}{2}$  inches in width. The flowers appear in June in a cluster of corymbs terminating the shoot. Each flower is about three-quarters of an inch in diameter, and is rose-coloured. The shade varies in depth in different plants, and the flowers are sometimes almost white. London says the leaves are poisonous to cattle and sheep, but not to deer.

**K. L. VAR. MYRTIFOLIA** is a distinct and very pretty plant, although not so well known as one might expect. It is of dwarfer habit, and its leaves are not much larger than those of the Myrtle, being about  $\frac{1}{2}$  inches long, from a quarter of an inch to half an inch wide, and sharply pointed. The flowers also are smaller than in the type, but the whole plant when in bloom is as pretty as it is neat and compact. I have seen it in quantity and in fine condition in the Knap Hill Nursery.

**K. L. VAR. POLYPETALA**.—Professor Sargent, of the Arnold Arboretum, sent a plant of this variety to Kew three or four years ago. Its foliage does not differ from that of the ordinary *K. latifolia*, but the corolla, instead of having the usual saucer shape, is divided into several segments, as the name implies. It flowers each year at Kew at the same time as the others, but deserves mention merely as a curious freak.

Besides these three species and their varieties there appear to have been in cultivation, formerly if not now, two other species—viz., *cuneata* and *hirsuta*, but I have seen neither of them. It would be interesting to know if any reader of THE GARDEN cultivates either of these species at the present time. W. J. BEAN.

**Lonicera japonica**.—This name includes the different forms of one species of Honeysuckle which are variously known in gardens and nurseries as *L. chinensis*, *Halleana*, *flexuosa* and *brachypoda*. It is just now one of the most charming shrubs in flower, alike for the luxuriant elegance of its growth and for the sweet, strong fragrance of its blossoms. It is a climbing plant, but by giving it the support of three stakes 6 feet or more high, arranged as a tripod, it will form a dense graceful bush, and may in this way be used to furnish the open border. It has broad ovate leaves, each from  $\frac{1}{2}$  inches to 3 inches long, of a beautiful rich green. They are opposite, and a pair of flowers is produced in the axil of each one, so that four flowers appear at every joint. At first they are creamy white, but gradually become yellow with age, the four upper parts of the corolla uniting to form a broad, oblong standard. The fragrance is like that of our native Honeysuckle, with a suggestion of Cowslip added. In mild winters like the two last this *Lonicera* is evergreen. It is a native of China and Japan.—W. J. B.

**Ledums as fly-catchers**.—As a note supplementary to Mr. Bean's admirable paper on these plants in THE GARDEN, p. 28, I should like to point out their fly-catching propensities. Early in May of this year, Mr. Smith, of Newry, sent me sprays of *Ledum palustre* or *L. glandulosum*, I am not certain which, with the remark that the flowers had a singular attraction for gnats or small flies. The flower-clusters bore out his observations, each bloom having one or more small black gnats in its centre firmly glued to the glandular and viscid ovaries. On sending some of the specimens to Dr. G. H. Carpenter, of the Dublin Natural History Museum, he kindly identified the little flies as *Empis vernalis*, Meig., and remarked that he did not previously know of the insect-trapping propensities of these Heath.

Whether the insects are caught in a merely mechanical way, as happens when flies stick on to the outside of the glutinous corollas of some Cape Ericas, or whether they are useful in securing cross-fertilisation, is not accurately known, but as the flies live for some days struggling inside the flowers, it seems probable that they may be of some aid in fertilisation.—F. W. BURBIDGE.

## BOOKS.

### POT-POURRI FROM A SURREY GARDEN.\*

GARDENING is rapidly becoming a fashionable subject for writers, some of whom, it is true, are very ill-prepared for the task, as we may see by the silly articles in one evening paper. Those illustrate a new way of writing, like the new way of drawing—that is, having no preparation for the work, but writing as a person might who had never thought of the subject at all. Only a month or two ago in a well-known magazine appeared an article on flowers, in which it was stated that it was about twenty years ago since English people began to take an interest in them! Mrs. Earle's book is not, we are glad to say, of this class. She comes of people who for a good many generations back took their highest pleasure in their gardens, and greater pleasure than we fear the present generation of women on bykes, women at golf and cricket, horsewomen and new women generally are likely to share. It is an interesting book about many things, and Mrs. Earle being a good gardener and not a mere patron of the art, there is not a little to be learnt in it, and much with which we agree, especially in her remarks about the spoiling of vegetables under the name of "improvements."

It is a great mistake, when marking the nurseryman's seed list, to order the vegetable described as "giant," "large," "perfection," &c. Unless your soil is very strong such vegetables do not grow large, and they do grow tough and tasteless. This "giant" cultivation has been brought about to win prizes at shows. Amongst the delicious vegetables that have been ruined by growing them too large are Brussels Sprouts. I consider those sold in the London shops are not worth eating, they are so coarse; but one can get the seeds of old-fashioned small kinds. These are far sweeter, nicer and prettier, either for putting into soup, for boiling and frying afterwards in butter, or for boiling quite plainly in the ordinary English way. They are also far more delicate for a purée, which is an excellent way of dressing them. If fried and put on buttered toast, they make a very nice second-course vegetable in winter.

It is curious that, notwithstanding the talk about a thing, how many years it takes the French to take up Rhubarb or the English Celeriac, about which Mrs. Earle writes—

Celeriac is an excellent vegetable, not very common in England, and, when carefully cooked, with a good brown sauce, forms a valuable contribution to the winter supply. One of the constant difficulties in the management of a house, whether large or small, where the vegetable are grown and not bought, is that the gardener brings them in, and the cook throws them away into a corner of the scullery or into the pig-tub. Only last summer a gardener from a large place in the neighbourhood said to me while walking round my small garden: "What! you grow Cardoons? I took in beautiful ones last year, but they were never used: the cook said she didn't know how to cook them." The following is a good recipe: The length of time Cardoons re-

\* "Pot-Pourri from a Surrey Garden." By Mrs. C. W. Earle. (London: Smith, Elder and Co.)

quire in cooking depends on age and size, and varies from half an hour to three or four hours. Scrape the stalks and pull off all that is thready outside. Cut them into bits about 4 inches or 5 inches long, or longer if served in a long, narrow dish with marrow on toast at each end. As you cut them throw them into a basin full of water, into which you put a little flower to keep them a good colour. When all are prepared, have ready a large crockery stew-pan with boiling water, herbs, a little salt and pepper, and a good-sized piece of raw bacon. The rind of the bacon should be cut in little bits, but not so small as to get mixed with the Cardoons. Boil the whole slowly, and prepare a brown sauce apart with well-flavoured stock. Thicken this with flower (burnt to a light coffee colour), butter and a little sherry. Let it simmer for two hours, skimming it well. Strain it half an hour before serving.

### A FINE STAR OF BETHLEHEM.

A few years ago I brought from Paris some bulbs of *Ornithogalum pyramidale*, the flower-spikes of which are sold at the end of June in the Paris flower market under the name of *L'épée de la Vierge*. I have never seen the plant grown anywhere in England as I have grown it, and yet in every way it is quite one of the most satisfactory flowers for picking that I know. If you gather it just as one flower is coming out, the whole of the long spike grows and flowers in water up to the very top, bending and curling about, and assuming the most graceful curves. No one can grow a better flower plant to send to London. It has one fault in the garden—the leaves droop and turn rather spotty and yellow before the flower comes quite to its prime; but this defect can indeed be forgiven for the sake of its many merits. I cultivate it nearly as I do the above-mentioned Lilies; only, when the bulbs are dug up I place the small ones at once in a nursery, but the large ones are well dried in the sun and not replanted till October. A mulching when they begin to show through in the spring does them good.

### GARDEN LAWNS BARE OF FLOWERS.

In the old days of bedding-out, lawns used to be cut up into beds and patterns. Now the fashion has changed, and bedding-out has become so generally condemned that most people have levelled and turfed over the rounds, stars, crescents, and oblongs that used to enliven their lawns for a short time, at any rate, every autumn. As a result of this reaction, there are now an immense number of large, dull lawns, which as a rule slope slightly away from the house, and often to the south. They are wet in rain, and dry and brown in hot weather. They have their weekly shave with the mowing machine, and lie baking in the sunshine. The poor plants, which would flower and do well in the open, are planted at the edges of the shrubberies, where—in a light soil at any rate—they are robbed and starved into ugliness and failure by their stronger neighbours.

### GROWING THE WHITE LILY.

The difficulties of growing the Madonna Lilies seem to be overcome by Mrs. Earle, and we cannot do better than let her tell her own story.

*July 8*.—I consider no trouble too great, whether the garden be large or small, to grow the beautiful stately Madonna Lily (*Lilium candidum*). It requires very different treatment from other Lilies, and flourishes in rich, heavy soils in full sun, where many Lilies would fail. Gardening books often tell you it is fatal to move these Lilies, but I think this has arisen from gardeners moving or disturbing them when they have "done" their borders in October or November, and when the Lilies have made an autumn growth; moving them then is fatal. When I used to leave them alone they made an excellent top growth in spring, but dried up and died down without flowering. What I now do when they begin to die down some time this month, whether they have flowered or not, is to dig them up carefully with a fork, remove all offsets, re-make and

manure the ground well, mixing with it some brick rubbish or chalk, and then replace the large bulbs, planting them rather deep, and not too close together. In this way every bulb flowers. A little liquid manure helps them to open well when they are in bud the following June. The small offsets are put into a nursery apart, and many of them will flower the following year in a way that does admirably for picking.

**A NEGLECTED SALAD.**

February 14.—Salads are rather a difficulty during the early spring in English gardens. In seasonless London everything is always to be bought. I wonder why Mâche (Corn Salad, or Lamb's Lettuce), so much grown in France, is so little cultivated here? People fairly well up in gardening come back from France in the winter, thinking they have discovered something new. Mâche is a little difficult to grow in very light soils, and the safest plan is to make several sowings in July and August. We find it most useful, but, without constant reminding, no English gardener thinks of it at all, though it is in all the seed catalogues. As it is an annual, without sowing you naturally do not get it, and if sown too late, it is bound to fail. In very dry weather we have to water it at first.

**ASPECT OF HOUSE.**

The next question of the aspect of a house is sensibly discussed

The longest side of the house faces west. How I love it because of this! To my mind every country house is dull that does not face west and have its principal view that way. Modern civilisation forbids us to enjoy the sunrise, but the varied effects of the sunset sky glorify everything—the most common-place gable or the ugliest chimney-stack, a Scotch Fir or an open field, which assumes a green under an evening primrose sky that it never has at any other time. The sky is like the sea for its ever-changefulness. You may watch sunsets most carefully every day in the year, and never will you see twice exactly the same effect. How we all know, and notice after midsummer, that marching south of the sun at setting-time! The old fellow in June sets right away to the north, over the common, changing group of trees and a little distant hill to purple and blue. At the autumn equinox he looks straight in at the windows as he goes down between the stems of the two tall Fir trees. Who, when forced to come in to dinner on a summer's evening, does not appreciate a west dining-room with tall panes of glass which give the power to measure the gradations of the sky, from the deep grey-blue of night's garments at the top, to the bright gold, streaked with purple and crimson, at the base—the earth growing mysteriously dark all the while, and the evening star shining brighter every minute? Architects tell you, and men say, they prefer that a house should face south-east. I do not at all agree with them; the effects of evening to me are too much to give up for any other advantage in the world, real or imaginary. It is far easier to make some other room into a breakfast-room, to catch the morning sun in winter, than to change your dining-room in the summer for the sake of the sunsets.

**THE WINDOW BLIND NUISANCE.**

There are many matters in the book of interest to the householder besides the gardening part and many good recipes. The following may be of use to the many who have suffered and suffer daily with the innumerable patents to produce that nuisance, the jack-in-the-box window blind, where no patent or mechanism of any kind is required.

They are expensive to put up, expensive to maintain, and very difficult to keep clean in London. I never have them in my own rooms, in bedrooms or servants' rooms, in the stable or gardener's cottage. What I do have is an inner curtain hung from a small rod on the window. It can be made of any variety of material, to suit

the different windows and the requirements of the room—thin silk (the effects of light through silk—orange, red, yellow or green are very pretty), chintz, muslin, or the thickest dark blue or green twill lined with calico, to keep out light in the bedrooms in the country (in London I think light blue or green twill unlined is sufficient); and the most useful of all is the common red Turkey twill, lined or unlined, which washes year after year, and always looks fresh, clean, and bright, and practically never wears out. In many modern windows these inner curtains enable you to dispense with heavy outside curtains altogether—to my mind an advantage, as drawn curtains almost always make a

means of prong or hoe. Mulching is most helpful in maintaining vigour and free-flowering. If the second spit cannot with safety be brought to the surface, let it be turned over and well broken. — M. T., *Carrou, N.B.*

**ROSE GARDEN.**

**ARRANGING TEA-SCENTED ROSES IN VASES.**

Few flowers are so highly esteemed for decoration as the Tea-scented Rose, being charming in colour and refined in appearance. Added to the foregoing characteristics there is another charm—that of fragrance. For this valuable property alone these flowers are more readily appreciated than the brighter and perhaps more striking Hybrid Perpetuals, and in the arrangement of vases, epergnes, hand-baskets and other receptacles the Tea Rose for the purpose of home decoration is more often sought after.

As already mentioned, the Tea-scented Roses give us soft and beautifully refined colours—white, blush-white, delicate rose, pale pink, flesh colour, yellow, fawn, apricot, salmon-pink, rich salmon and carmine, besides many other intermediate shades. Any reader with a taste for the pleasing association of colour should have little difficulty in fixing upon those which would give the best and prettiest effects. For associating with these Roses nothing suits them so well as their own foliage. From the time that the first lot of blossoms is ready a grand lot of Rose foliage may also be obtained. That of the Tea-scented Rose is often so highly coloured that this is often in itself quite a picture, and when in such condition there is nothing better for association with the blossoms than a free use of its sprays and



*A Vase of Tea Roses.*

room stuffy and nearly as airless as did the shutters of our forefathers. All the same, thick curtains are, of course, required in the country in winter for warmth.

**Pansy culture.**—It is often remarked that Pansies can be cultivated in Scotland in a manner which southern cultivators cannot imitate. This I dispute. I have cultivated them with comparative ease in the south and west of England. Trench the ground thoroughly two spades deep, place a good coating of decayed farmyard manure under the top spit, give plenty of room to the plants, and if watering is necessary, let a thorough soaking be given. If this cannot be done, better give none at all, and keep the surface loose by

leaves. The Tea Roses are more easily arranged in vases, &c., than the H.P.'s, and often, being less cumbersome, the simplest novice may achieve considerable success. Most Rose growers are opposed to the use of wires when decorating a stand or filling a vase. Where a number of individual blooms are arranged in one vase the necessary lightness and grace could not well be obtained without the aid of wire supports. Bouquet "stubs" are the best for the purpose, and they can be bought of any florist. The Rose should be wired in such a way that it does not become an eyesore to anyone. Hand-baskets and the base of an epergne should be filled with a nice green

Moss, and the wires fixed on the stem of the Rose should be stuck into this material, plenty of space for each flower with its sprays of leaves being allowed. In this way a dozen Roses may be sufficient to fill a pretty hand-basket or bowl for a dinner-table decoration. Adopting the same rule, vases of large size should have the opening filled with Moss, and the flowers arranged in like manner to that described for baskets, &c.

Small tubes and vases are seen to greatest advantage when filled simply with two or three small flowers and buds. Epergnes are best when filled with medium-sized flowers and buds, about three blooms being allotted to each arm of the stand. Crowding must always be avoided. Each bloom should stand out distinctly from its neighbour, and so that the foliage which was cut with the flower should also lend attractiveness to the arrangement. Noble vases of the Tea Rose may easily be arranged, and without artificial support, when the flowers are cut in sprays.

**Rose T. B. Haywood.**—This Rose undoubtedly has a future as a good reliable late-flowering Hybrid Perpetual. It has the fine form of Mme. Victor Verdier, and the colour is a rich crimson somewhat in the way of Louis Van Houtte. I consider it a worthy addition to a class that has had but few notable acquisitions during recent years.—P.

**Rose Waltham Climber No. 3.**—Fragrant varieties of Roses can never become too plentiful. I think I should not be far wrong in saying that to the majority of individuals colour and perfume take precedence over form and habit. The above Rose is very sweetly scented, and for a climbing Rose this is a great boon. The flowers are of a clear scarlet-crimson colour. It is a very double variety, and the pointed outer petals resemble in a small way those of La France. This Rose is a good vigorous grower, with reddish foliage, and is admirably adapted for a south or west wall.—E.

**Rose Josephine Marot** is a splendid showy garden variety at present very little known. It is of very vigorous habit, producing fine bunches of flowers on good stiff stems. A peculiarity of this Rose is that each panicle of blossom will be composed of Roses of three different colours. The half-open flowers are of a delicate blush shade, merging to almost pure white as they expand, whilst the pretty buds are of a deep rosy hue. As the flowers are very lasting, these three colours may be seen at one time upon one stem, thus producing a very distinct and pretty effect. It is an excellent variety for cutting.

**Rose Climbing Niphetos.**—This Rose appears to improve with age. A few years ago I planted it in a greenhouse, fixing a trellis to train it on. The plant grew vigorously enough, in fact more so than I had ever seen the ordinary Niphetos do, but for several seasons it produced very few blooms. As it became thoroughly established, however, and grew less vigorously, flowers were produced in much greater quantities. I think they are less compact than those of the old variety. After flowering is past, all old wood that can be spared should be removed and the young shoots of the current year tied evenly in. This will give the plant a much better chance than if the thinning is left till the winter.—GROWER.

**Rosa lævigata** *rel.* **R. sinica** *rel.* **R. ternata.**—Several notices have appeared lately in THE GARDEN concerning this beautiful Rose, but I have not seen one fact mentioned—viz., that the leaf of this Rose is composed of three, and only three, leaflets, and, to the best of my belief, no other Rose has this characteristic. In this country it flowers several times in the year, and when it is at its best it is really a splendid object covered with its enormous blooms, 4 inches or 5 inches in diameter, and in such profusion that at a short distance one would say a white

sheet had been spread over the plant. The leaves are as evergreen and coriaceous as those of the Camellia, whence, no doubt, in many French catalogues it is called Rose Camellia.—F., *Benifica*, *near Lisbon*.

**Rose The Garland.**—This Hybrid Musk Rose should find a place in every wild garden, or failing that it should be planted where it can clamber over stumps of trees, arbours, or in fact any position where a good free-growing Rose is wanted. Its immense panicles of fragrant tiny buff coloured buds and creamy white blossoms are lovely. The individual flowers are about 1½ inches in diameter, and it is quite common to see a shoot of this Rose bearing ten to twelve laterals, each one of these containing as many as twenty to thirty buds and blossoms. When the blossoms upon these laterals are all expanded, revealing as they do the beautiful and numerous yellow stamens, they have indeed a very pretty effect.

**Rose Souvenir de Mme. Eugene Verdier** (H.P.)—This variety must not be confounded with a very lovely Hybrid Tea of the same name. It belongs to a type of Rose that formerly was much appreciated. The flowers are very large and extremely flat, but such Roses have gone out of fashion in this country, although on the Continent they still are held in esteem. I maintain that the more diversity of form we can secure the more interesting will be our collections, and upon this ground I recommend the above variety. The colour is a pleasing shade of rosy-pink, and the very double flowers are quite 7 inches in diameter. Such enormous blossoms, borne as they are upon still Etienne Levet-like stems, have a very decorative value, and one can imagine that a fine effect would be produced by massing together a goodly number of plants of such a fine Rose.

#### PROGRESS IN HOME-RAISED ROSES.

In looking over the official list of new Roses issued to members of the National Rose Society, I am struck with the large total named as being introduced in the spring of 1894 and subsequently. No doubt very few of the Continental varieties have been missed, but no less than 343 are mentioned as appearing in English nurserymen's lists since 1894. Over fifty of these are British or Irish raised Roses, and include such grand novelties as Muriel Grahame, Tom Wood, Alister Stella Gray, Captain Hayward, Jeannie Deans, Empress Alexandra of Russia, Helen Keller, Laurence Allen, Mrs. Rumsey, Mrs. W. J. Grant, Mrs. R. G. S. Crawford, and Sylph. Home-raised Roses have been so numerous, that few really good new ones come from the Continent when compared to previous years. Among the 350 I can only find Alice Furon, Antoine Rivoire, Charlotte Gillemot, Comtesse Dusy, Germaine Trochu, Mme. A. Chataney, Hippolyte Barreau, Mme. Carnot, Mme. Jules Finger, Mme. Wagram, Comtesse de Thronpe, Princesse Alice de Monaco, Mrs. W. C. Whitney, and Yvonne Gravier as likely to be standard varieties; most of the remainder from abroad will certainly not be grown to any appreciable extent. Although it may well happen that a few are missed from the above list, it does not look promising to find little over a dozen one can really recommend out of 300 distributed in 1894 and since. Among our home-raised varieties we find very few indeed that are not still favourites in the garden. There is no need to name a long list, but taking a few which occur while I write, we find some really grand quality. Duke of Edinburgh, Beauty of Waltham, Prince Arthur, Her Majesty, Mrs. John Laing, Duke of Connaught, Duchess of Bedford, Earl of Dufferin, Ethel Brownlow, Margaret Dickson, Salamander, Lady Mary Fitzwilliam, Viscountess Folkestone, Devoniansis, Cleopatra, Mrs. Paul, Souvenir de S. A. Prince, Lady Henry Grosvenor, and Cheshant Hybrid are only a very few in addition to the grand varieties named from among the newer introductions, and this gives us a much higher percentage of good Roses than can be found in the many hundreds raised abroad.

But Continental growers have given us some of the grandest of all. A. K. Williams, Horace Vernet, Charles Lefebvre, Alfred Colomb, General Jacqueminot, Dupuy Jamain, Gabriel Luizet, Marie Baumann, Maurice Bernardin, Ulrich Brunner, and Prince C. de Rohan among the Hybrid Perpetuals; with Anna Ollivier, Catherine Mermet, Comtesse de Nadaillac, Edith Gifford, Innocente Pirola, Niphetos, Marie Van Houtte, and Maréchal Niel cannot well be beaten in their respective colours; but these are the pick of over 2000 varieties. In Mr. E. B. Lindsell's champion stand of thirty-six varieties at the recent Crystal Palace show no less than thirteen were of home origin; while in the seventy-two staged by Messrs. Harkness and Sons, and which won the champion trophy in the trade classes, there were twenty-six home-raised Roses. In each case a little more than a third of the varieties staged were raised in Great Britain or Ireland, and when we consider the enormous number sent out by Continental growers this is a very satisfactory account, especially when we also note that fifteen out of the twenty-six were of quite recent origin.

We have yet another proof of improvement in this respect. In a very strongly-contested class for twelve new Roses, and which was open for any of the 343 varieties named by the society, Messrs. Dickson and Sons, Newtownards, were a long way ahead with those of their own raising only, and no less than nine of these have yet to be put into commerce. It would be difficult to find a better dozen than the following: Mrs. John Laing and Mrs. R. G. Sharman-Crawford are two of the grandest and most distinct pinks. They are always good, no matter the season, and are grand in growth and free blooming. In Duke of Edinburgh and Prince Arthur we have two of our best dark crimsons, always of good form, quite distinct, and opening well. If we want two good whites, none can be better than Souvenir de S. A. Prince and Climbing Niphetos, both sports from varieties that have been prime favourites for more than fifty years, and retaining all their good qualities with the purest white blossoms. In Crimson Rambler and Waltham Climber No. 3 we have two of the very best deep reds for walls, arches, or pillars. Viscountess Folkestone gives us a grand salmon-shaded flesh tint and some of the sweetest scent found in Roses. Her Majesty is well known as the best large Rose with a clear satiny-pink shade, and Mrs. W. J. Grant cannot be beaten for freedom of flowering and in usefulness of its blossoms from the bud stage upwards. Our best striped Rose is found in Pride of Reigate, and it would be very easy to name a second dozen in no way inferior to the above.

RIDGEWOOD.

#### SWEET-SCENTED ROSES.

"D. T. F.'s" note (p. 69) implies that the National Rose Society, or rosarians generally, have quite lost sight of perfume in Roses. Now there are very few Roses that do not smell sweetly, certainly less than a dozen, and I note that no less than thirty-eight are mentioned in the society's catalogue as being specially fragrant. His suggestion of prizes for the sweetest Rose or Roses in a show is almost impossible to carry out. Who shall decide when there is such a difference of tastes? I know persons who even profess to find very little perfume in Socrates and La France when compared to other varieties. "D. T. F." writes that we have developed size, form, and colour, and done "little or nothing" to intensify sweetness. Baroness Rothschild is scentless, but Laurence Allen, a Rose of 1896, is more double, of better form, a little brighter in colour than the Baroness, and certainly one of the sweetest-scented Roses grown. Is not l'Idéal equally as sweet as the old Damasks? Mrs. W. J. Grant, Captain Hayward, Gustave Piganeau, Mme. de Watteville, G. Nabonnand, Luciole, Antoine Rivoire, Mrs. W. C. Whitney, Pink Rover, Viscountess Folkestone, and Mme. Alfred Carrière are only a few of those introduced recently, and which are more than usually sweet-scented, even

when compared to the very best of our old Roses. Nor do any of the raisers omit to give prominence to the quality of perfume when describing varieties, thus clearly showing that this is still considered a desirable quality in the Rose.

I maintain that, compared to the number of varieties grown, Roses are even sweeter now than was the case years ago, and if we can have more perpetual-flowering qualities, better form, and higher colours, so much more to the credit of raisers.

RIDGEWOOD.

**Rose Horace Vernet.**—This superb Rose was exhibited in grand form at the recent Crystal Palace Rose show, and doubtless it has won many more admirers. The fact, however, cannot be too widely known that such flowers are produced upon what are known as maiden plants, that is plants budded last year. Practically it is a failure as a cut-back, and unless one is prepared to bud a few each year, it will be better not to attempt its cultivation only in a very limited quantity. It is very unfortunate that such a variety should be thus handicapped, but it does not stand alone in this respect, there being several kinds, for instance, Xavier Olibo, Louis Van Houtte, Harrison Weir, &c., that are only really good as maidens.—GROWER.

**Roses with coloured foliage.**—In a note upon the above (page 41) I notice two important omissions. *Perle de Lyon*, an old Tea, sent out in 1873, has the deepest bronzy purple foliage of any Rose. Unfortunately, it does not produce very good flowers. They are uncertain in opening, but of the deepest golden yellow. *Mme. Dennis* is another old Tea, of great vigour, and producing quantities of buds and new growth throughout the season. I have several rows of this grown solely for the supply of deep bronzy-red foliage. One does not like to cut away the pretty tips of growth in many varieties and so sacrifice bloom; but *Mme. Dennis* is not of much service as a flower, and produces such quantities of young shoots that one need have no compunction in this respect.—RIDGEWOOD.

**Colour in Roses William Allen Richardson and l'Idéal.**—I have been interested in the correspondence lately appearing in THE GARDEN on this subject. Two growers this spring have asked me if I knew whether this sporting (if I may so term it) was general with the two varieties given above, neither having noticed this freak before. In both cases the majority of blooms have come white instead of their true colour. I have grown both, but have never as yet seen them do this. *l'Idéal* flowers profusely every year on a low south wall and the colour is superb. I prune my plant fairly close every spring, as the wall is only 5 feet high. I have it on its own roots as well as on the *Manetti*, but can detect no difference as regards the colour. Another good Rose I would like to advocate the claim of as a button-hole Rose is *Papa Gontier*, a beautiful bright crimson and a good doer.—J. MAYNE, *Bicton, Devon*.

**Scotch Roses at last.**—Those who have seen the Aberdeen, Dundee, and Edinburgh Roses at their best regret the abnormal lateness of the season that prevented these from taking a part in the Rose show at the Crystal Palace on July 2 this year. At a recent meeting of the Scottish Horticultural Association in Edinburgh there were some choice blooms from the Messrs. Croll, of Broughty Ferry, Dundee, and Mr. Hugh Dickson, of Belfast, also sent some beautiful Roses. Among Dundee Roses the following were superb: *Gustave Piganeau*, *White Lady*, *Comte de Raimbaud*, *Caroline Testout*, Mrs. John Laing, *Francois Michelon*, *Lord Bacon*, *La France*, *Marguerite de St. Amand*, *Senateur Vaisse*, *Victor Verdier*, *Niphotos*, *Luciole*, *Rubens*, *Jean Ducher*, and *Mme. Welch*. These and other fine Roses were fringed with choice bunches of *Common and Crested Moss*, *Wm. Allen Richardson*, *Gloire des Polyantha*, &c. Among Mr. Dickson's Irish blooms the following were among the best: *Gustave Piganeau*, *Caroline*

*d'Arden*, Mrs. John Laing, Countess of Devonshire, Countess of Sutherland, *Prosper Laugier*, *Heinrich Schultheis*, and Mrs. *Sharman Crawford*.—D. T. F.

**Rose notes.**—I do not know what may be the experience of those who have the advantage of a good Rose soil. Here, where the soil is very light, a few characteristics of the present season are a very fine display of Teas, especially on walls, a good display generally on standards and bushes, but quickly over, and very favourable notes on some of the less-known Roses and one or two that are sometimes decidedly poor. In the latter may be mentioned the white and yellow forms of *Banksian* that have flowered remarkably well. In the single or semi-double class *Bardon Job* is a great favourite, and is the only variety of this particular shade in the section. It stands very fairly in a cut state, much better than the appearance of the flower would indicate. *Macrantha* contrasts finely with it, and alternate plants of these two varieties make a very attractive bed. I have been interested this year in our small colony of the *Polyanthas*. The plants have been in their present quarters for several seasons, are consequently well established, and flower with great profusion. I think the best members of the family might be utilised more frequently in connection with standards. If alternate plants were put in we should have Rose beds fairly well covered instead of looking on a collection of walking-sticks. Unnecessary crowding can always be avoided. In a cut state the *Polyantha* family are beginning to be appreciated at their true value, and few things are better for vases than nice clusters of such varieties as *Ma Paquerette*, *Perle d'Or*, and *Red Pet*.—E. B. C.

## STOVE AND GREENHOUSE.

### ZONAL PELARGONIUMS FOR WINTER.

WHATEVER the value of these plants in the flower garden, there can be no question as to their utility for winter blooming, their bright and telling colours lighting up the greenhouse when it is most needful. Doubtless the modern style of horticultural structures has done a great deal to bring this phase of their culture into popularity, but the efforts of English raisers of new varieties have done a great deal more. In the old style of house the plants made plenty of wood during winter, but the absence of light and air prevented this blooming with any degree of freedom. In present-day houses opposite conditions obtain, and the plants thrive accordingly. I am now potting up the stock for next winter. They are potted in good loam of a fibrous character, a little dried cow manure, and plenty of leaf-mould and sand. After potting they should be stood outside in the full sun and kept well on the dry side until root action is free, when a fairly liberal allowance is necessary. So treated, the plants make a stouter growth than in frames, owing partly to the fact that more room can be allowed. They are almost sure to push flower buds at once, but these should be pinched out. The plants may stand in the open until the middle or end of August according to the weather, when protection must be given. At all times under glass a good circulation of warm dry air must be kept up about the plants, these being stood as close to the roof as possible and no shading allowed at any time. If more convenient, the plants may be brought on in batches to keep up a succession of bloom, though the same plants will go on blooming for several months. In the meantime, it is true, they are apt to grow a little unshapely, but if duly fed at the roots the quality of the flowers is as good at the end of the season as at the beginning. The plants after blooming may be

placed in a vinery or greenhouse and kept a little on the dry side until June, when they may be cut back, using the prunings for propagation if desired, and stood outside. Double-flowered varieties require rather more warmth to induce them to open freely than do single ones, but in a house kept up to 60° at night and fairly dry either will be satisfactory. The varieties are too numerous to give anything like a good selection, but, as a general rule, the English-raised varieties are far superior to the continental ones.

R.

**Heliotrope planted out.**—It is surprising how much space *Heliotrope* planted out in a border and trained over a trellis on a back wall will cover in a single season. In a garden near here the *Heliotrope* is a great favourite, and provision is made for a supply of cut bloom all the year round. At Christmas one large spreading plant on a vinery wall was covered with large trusses of fragrant bloom. Cuttings are taken in spring, and as soon as rooted are grown on in a moist intermediate temperature, being duly potted on until a 6-inch pot is well filled with roots. Planting out is then done in a good loamy soil and where a fair amount of light can reach the plant. An increased quantity of bloom in winter may be secured by pinching out the bloom-trusses in summer.—J. C.

**Streptosolen Jamesoni.**—This has been many times alluded to in THE GARDEN as a desirable plant for the greenhouse, its distinct shade of colour and freedom of blooming standing it in good stead. Besides this, too, it will bloom freely in the open ground during the summer months. In Hyde Park some large plants of it are flowering in as great profusion as the large *Heliotropes* and *Fuchsias* with which they are associated. The genus *Streptosolen* is nearly related to that of *Browallia*; indeed, by some authorities it is included in this last-named genus. In colour, however, it is totally different from the commonly-grown forms of *Browallia*, in most of which the flowers are of some shade of blue, whereas the blossoms of the *Streptosolen*, which are of a lightish yellow when they first expand, change afterwards to a bright cinnabar-red. This *Streptosolen* was introduced nearly fifty years ago, but was soon lost to cultivation. M. André, however, re-discovered it in Ecuador in 1882 and imported it into France, from whence it soon became general in cultivation.—H. P.

**Kämpferia Kirki.**—In some of the *Kämpferias* their handsome foliage is the principal claim to recognition, while in others the flowers are so ornamental that they well merit cultivation. The species above mentioned belongs to the latter class, and very pretty it is when in flower, and though the blooms are thin in texture and do not remain long in perfection, yet a succession is kept up from one scape for a considerable time. This *Kämpferia* forms a thick, fleshy root-stock, and passes the winter in a totally dormant state. Upon the return of spring, a few plantain-like leaves are pushed up from each crown, and generally during the month of June the flower-scapes make their appearance. In shape, size, and colour the flowers bear a great general resemblance to those of *Mitonia vexillaria*, but they are more flimsy and do not last so long. This *Kämpferia* is a native of the Zanzibar region, and when first flowered in this country, about sixteen years ago, it was known as *Cienkowskia Kirki*, under which name it was figured in THE GARDEN, November 19, 1881. Like most of the *Gingerworts* to which it belongs, this *Kämpferia* is of easy culture, all that is required being to keep it nearly dry during the winter, and about February the root-stock must be shaken clear of the old soil and again repotted in a compost consisting of loam, well-decayed leaf-mould, and sand. After this the soil must be kept slightly moist till the leaves begin to push above the surface, when the supply of water must be increased. It is readily propagated by

division, which is best carried out when repotting. This *Kæmpferia* is such a distinct plant that when in bloom it will attract a good deal of attention for this reason, as well as for the beauty of its blossoms. A second species, *K. rotunda*, with purple and white blossoms, was figured in THE GARDEN, August 18, 1888, while of those remarkable for the beauty of their foliage, *K. Gilberti* is one of the best. This forms a dense tuft of Funkia-like leaves of a deep green, marked with white. It grows about 6 inches high and is very useful for edging groups.—T.

— Although the flowers of this plant do not last very long, they are produced over a long season. The flowers, of a soft rosy purple tint with a yellow centre, are each about 3 inches in diameter. They occur on a slender stem from 6 inches to a foot in height. The culture of this plant is not difficult. It should be grown in a moist stove heat and potted in a mixture of peat, fibrous loam, plenty of sand and a little well-dried cow manure. The plants rest all through the winter, and may at this time be kept nearly or quite dry in a warm greenhouse temperature. They may be repotted just before growth commences, kept moist when the growth becomes active and until this shows signs of dying off in autumn. It is a native of Zanzibar, whence it was introduced in 1872.—GROWER.

#### SUMMER TREATMENT OF CALLAS.

For many years I adopted the plan of planting out my Arum Lilies in the open garden in June and lifting in autumn. No fault could be found with the growth the plants made, but the system has its drawbacks, one of the greatest being the destruction of so many of the young succulent rootlets, which cannot be avoided, however much care may be taken. Further, after potting and housing, many of the main leaves are apt to go off, rot sometimes seizing the stems. They are also so tender, that the first sharp frost cripples them if it catches them in the open garden. I do not mean to say that good results are not obtained by the planting-out system, but for the production of early blooms and, for the matter of that, quantity too, I think the pot system is the best. The plan recommended last season by "E. J." of keeping the plants through the summer in the pots and resting them, repotting them in August, has been practised by several gardeners hereabouts for years with the best results. The new roots being made after potting takes place, none of them are sacrificed, as is the case when they are lifted from the garden. Rotting of the leaf-stems is unknown, and an early and abundant lot of bloom is certain. One neighbour of mine allows his plants to remain in the same pots for two seasons, merely examining the drainage each autumn, surface dressing with rich loamy compost, and feeding with liquid manure when in full growth. The plants during summer are stood under the shade of a tall hedge and not watered at all, merely getting what reaches them from the clouds. Another grower lays the pots on their sides and allows the balls to become quite dry during the resting period, reducing the latter somewhat in autumn and repotting. No one could possibly wish for a better display of bloom, and I intend in future to treat my plants in this way—in fact, am doing so this season, feeling quite sanguine as to results.

A MIDLAND GROWER.

**Lagerstrœmia indica.**—Among the plants at one time popular in our gardens, but now rarely seen, must be included this Lagerstrœmia, or Crape Myrtle as it is sometimes called, which is one of the showiest of all our greenhouse flowering shrubs. Why it is not more generally met with is hard to say, for its cultural requirements are not at all exacting, and when in bloom it is the admiration of everyone. Though bearing the specific name of *indica*, this Lagerstrœmia is a native of China, from whence it was introduced

in 1816. It forms a freely-branched shrub, that grows from 6 feet to 10 feet high, and is clothed with deep green ovate leaves. The flowers, which are of a particularly attractive shade of rich pink, are borne in terminal panicles, and so freely are they produced that when at their best the plant is quite a mass of bloom. The petals being very much crisped, the clusters of flowers have a peculiarly loose and uncommon appearance. It may be grown in large pots or tubs, as the Orange is sometimes treated, and in this way it may be kept in health and flowered year after year with but little attention. It succeeds best in a rather warm greenhouse, and a thorough ripening of the wood is necessary in order to ensure a good display of bloom.—H. P.

**Potting Primulas.**—A good many Primulas of the single section will be potted this month into their blooming pots. The old plan of standing the plants behind north walls during summer is less common than formerly, many gardeners preferring to give them more light and sun. For some years past I have grown mine in a frame facing south, the glass being rather heavily shaded, this shading being reduced as autumn approaches. I was induced to try this plan from seeing large numbers of healthy plants in a nursery near Birmingham grown in low span-roofed houses, the roof-glass being merely shaded with whitening and the pots stood on coal ashes. Nothing could possibly have been more healthy, and I find that stouter plants and better trusses of bloom are produced on plants so grown than when brought on in semi-darkness behind north walls, especially if the season is dull and sunless. The pots should be well drained, and a compost of light fibrous loam, leaf-mould and silver sand used. Some growers add a little decomposed cow manure with good results, but feeding when the pots are getting well filled with roots can always be resorted to. Gardeners formerly used to pot Primulas with the neck or base of the plant out of the soil, steadying them with small wooden pegs, having an idea that basal rot followed lowering them well into the soil. This, however, was more imaginary than real, it being far better to make the plants quite steady and to exercise due care afterwards in watering. Under this treatment fewer plants will succumb in winter than when the crowns are left out of the soil, dry rot then often destroying many. Primulas enjoy a gentle damping over each fine afternoon, putting a little air on for the night.—J. C.

**Hibiscus Trionum.**—Last summer my gardener in my garden in Wiltshire called my attention to what looked like a weed growing between two flints, which formed part of an edging on the north-west side of my kitchen garden. It shortly afterwards presented me with a remarkable flower. I sent it to the editor of THE GARDEN for naming, and he was good enough to inform me that it was *Hibiscus Trionum*, called also *Hibiscus africanus*; and I have since found it very accurately figured in Nicholson's "Dictionary." The flower is about the size of a double florin, the petals a soft yellow, with a fine dash of purple at their base—a very lovely flower indeed. It kept on flowering from the beginning of August till the beginning of October. I was able to obtain from it a large quantity of seed and also a number of cuttings. I have made a little bed of seedlings (the seed having been sown in heat) now beginning to flower abundantly, and throwing out vigorous lateral shoots, each clothed with buds. It has but two demerits: one is that the flowers are very short-lived, but for this defect there is compensation in its freedom of flowering; and the other is that they shut up early in the afternoon. I have never seen the plant either at Kew or in any private or nursery garden, and how the seed came to deposit itself where it did is a matter for speculation. It is a curious fact that another plant of it showed itself last year at the same time in the garden of a relation of mine near Gosport.—G. R. R.

## GARDEN FLORA.

### PLATE 1129.

#### BICOLOR DAFFODIL ELLEN WILLMOTT.

(WITH A COLOURED PLATE.\*)

In any list of the largest, best, and most shapely Daffodils now known, I think growers would place this noble variety at the top of the poll. So far as can be known at present, it would appear to possess nearly, if not quite, all the requisites of a perfect garden flower. It blooms freely, and its flowers are shapely and of good substance and colour, as shown in the illustration. To say that it has received a first-class certificate does not prove much, since that honour has been showered on other and inferior varieties, but an early bloom from the original seedling bulb obtained the premier prize as the most perfect new Daffodil at the Birmingham Narcissus show two or three years ago, and it created, moreover, a good deal of interest amongst connoisseurs then present. This variety also received the silver-gilt Flora medal of the Royal Horticultural Society as the premier Narcissus of 1895. This noble Daffodil is named in compliment to Miss Ellen Willmott, of Warley Place, a most enthusiastic and successful amateur gardener. It is a seedling from John Horsfield crossed with pollen of a fine selected form of *N. variiformis*. It first flowered in 1894, and in 1895 a bloom obtained medals for the premier seedling both at the Royal Horticultural Society and at Birmingham. In 1897 it obtained a first-class certificate from the Royal Horticultural Society. The plant is somewhat dwarf, but throws up a tall, stout stem, bearing a flower of great substance and symmetry. It is early flowering, a little in advance of John Horsfield, of which it seems to possess the robust constitution.

But there are other very fine new Daffodils quite as vigorous in habit and as large in flower as is Mr. Engleheart's seedling, but as I believe even the best of them lack two at least of the essentials of a perfect bloom, viz., form and substance, not even the big and beautiful Weardale Perfection having quite the form, substance, and perfect balance between perianth and trumpet that are such features in the variety now illustrated. One of the greatest difficulties experienced by raisers of seedling Daffodils is to obtain well-balanced flowers, since the natural tendency is for either the perianth or the trumpet to preponderate in size, and more especially in form and substance. This natural tendency is remarkably well shown in the imported seedlings of the Daffodil known in gardens as *N. variiformis*, amongst which may be found the widest of variations, as implied in the name. Many forms are poor and thin, but now and then forms bloom that would compare with the plate; in fact, the best forms of *N. variiformis* yield flowers that are well-nigh as perfect as could be desired, but one can never be certain of obtaining them. A perfect bulb one year carries a perfect bloom, but the chances are that the bulb splits or divides after flowering, and yields two or three very ordinary blooms the following year. I mention the wild *N. variiformis* because its best and finest blooms so closely resemble those of Ellen Willmott in size, form and colour, although they may not be absolutely so perfect in substance or texture of perianth as is that nearly perfect and matchless flower. When I say a flower of any Daffodil is well-nigh matchless, it becomes necessary to allude to the

\* Drawn for THE GARDEN in Rev. G. H. Engleheart's garden by H. G. Moon. Lithographed and printed by J. L. Goffart.





known claimants in the select honour list of Daffodils, and those enumerated below are those of the first rank or quality as known to me: Ellen Willmott, Weardale Perfection, Mine. de Graaff (which at its best is an exquisite ivory-white flower, a glorified J. B. M. Camm), Hodsocks Pride (a common-place name for a really fine yellow flower) raised at Hodsocks Priory, Notts, by Mr. Mallendar, and once a premier bloom at the Birmingham Narcissus show. Monarch is another fine thing, and we have also Glory of Leyden and Golden Bell, all yellows. A very remarkable yellow seedling in the way of Hodsocks Pride was found some few years ago in the garden at Kells by the Marchioness of Headfort, and the first bloom was one of the most perfect flowers I ever saw. It was a chance seedling, and promises to become one of the best of all yellow Daffodils in the future. The above are the best of modern seedlings, and they will compete for place in our gardens until newer and still finer kinds surpass them. They are not, however, likely to be too plentiful for some years to come, since the price of a bulb of each variety would amount to a considerable sum. It is curious that in self-yellow Daffodils nothing so far, surpasses the wild *N. maximus* at its best. The seedling M. J. Berkeley, although good on some soils, cannot compete with the old *maximus* of gardens, nor with the *maximus* which Rev. C. W. Dod saw wild on the Landes of Dax, near Bayonne. It can never now be known how *N. maximus* found its way to the College Gardens at Dublin, whence it found its way to England and elsewhere, but that it therein attains remarkable height and size of flower has long been known. I can never grow Dutch or Lincolnshire *maximus* bulbs to anything like the same state of perfection as our own old stock, and yet the wild bulbs from Bayonne, kindly sent for comparison by the Rev. C. Wolley-Dod some years ago, are fully equal in growth and size of flower to our old stock. This must not be taken as an admission that they are identically the same, for there are notable differences—viz., the colour of the Bayonne flowers is a shade or so paler yellow, the twist in perianth is less marked, and whereas my own old stock dies down in June or July, the Bayonne bulbs retain their leaves quite green six weeks or more later in the season. We badly want pure strong yellows of the *maximus* and Santa Maria tone of colour, but of more free habit of growth and blossoming. Even a strong-growing and free-flowering strain of *N. obvallaris* would be a great gain.

Robust and free-growing white Daffodils are also desirable, and may perhaps be obtained by cross-fertilisation. So far it seems impossible to obtain colour in the trumpets of true Daffodils. It is possible to infuse orange and red into the cups of *N. incomparabilis* and *N. Bernardi*, but in crossing these highly-coloured kinds back with the true Daffodils it again becomes lost. A well-known statesman once said, "The more difficult a thing is to do, the more necessary it often becomes to get it done;" and colour in true big trumpet Daffodils is most assuredly a want long felt and a result much to be desired.

The plate is a faithful, but by no means a too flattering portrait of this variety. It shows remarkably well one essential characteristic on which all perfect perianth lobes in Daffodils absolutely depend. This is the slight overlapping along the margins of the lobes, and especially at their tips or apices. The central bundle of nerves forms a backbone, as it were, to the perianth lobes, but it is the tightening consequent on the infolding of the

perianth margins that also adds much to the rigidity of the flower. In other words, the growth along the perianth margins is slightly less than that which takes place in the centre; hence the stiffened bending forward and inwards of the perianth lobes on the principle of the open umbrella. Slight structural details, or apparently trifling differences of growth like these, often make the whole difference between a perfect flower and a loose or floppy one. These remarks also apply to bulb growth, which progresses through cycles or in a rhythmical manner; hence, in order to grow the most perfect flowers, we must study the production or growth of bulbs up to a maximum point, as do the growers of the finest Dutch Hyacinths, and as the Tulip fanciers did in the old days of exhibiting these flowers. A seedling Narcissus bulb is at its best the second or third year after first flowering, and it is only by annual division and careful replanting and cultivation that the maximum effort of the seedling bulb is ever again reached.

F. W. BUREIDGE.

## THE WEEK'S WORK.

### FRUIT HOUSES.

**LATE MELONS.**—If seed was sown as advised and the plants well looked after, they will now be ready for planting. The house selected for growing late Melons in should be well heated. If the house is well heated it matters not whether the plants be grown in pots or on mounds of soil, provided the latter can be placed directly on the slates or slabs overlying the bottom-heat pipes and fermenting material is not made use of. Should there be a deficiency of bottom-heat, and it is requisite to use fermenting materials to supply it in part or wholly so, then pots are the best medium to employ, as the roots can then be kept at home. The few roots that escape through the creek holes will not result in any harm being done. These pots should be prepared beforehand, and the compost for the plants to root into pounded hard, after which place them on a good firm basis, such as inverted pots or loose brick-built piers, which will avert all danger of their getting out of level and sinking when the bed subsides. The mounds of soil, too, should be made firm, and when planting see that the collars of the plants are kept above the level of the soil in the pots or mounds and slope the soil away from the stems so that water drains away at once. Place stakes to tie and train each plant to until they reach the wires and well water afterwards. As the plants advance in growth, attend to such matters as stopping and training, and endeavour to have the trellis well clothed with laterals, so that plenty of female flowers shall be open at one time, setting in the usual way when this takes place.

**AUTUMN CUCUMBERS.**—Where quantities of Cucumbers are in daily demand, it is a good plan to plant a house from which a crop of Melons has just been cleared, both to relieve the plants which have been in bearing during the summer months and to give a good supply until the close of the year, when they may, if the house be required for other purposes, be rooted out. If provision has been made to keep a good stock of young plants on hand, there will be plenty to select from, but if this matter has been neglected, seed should be sown at once, or, what is still better, take cuttings from the tops of some healthy growths found on existing plants and strike them under bell-glasses or in a propagating case. Cuttings root in a few days, and if put in before the cleaning and preparing of the house are carried out, there will be no delay. All that has been said with regard to the necessity of having plenty of heat for late Melons applies in an equal degree to these Cucumbers.

**WINTER CUCUMBERS.**—Towards the end of August a well-heated house should be set apart

and prepared for growing these in. I prefer a lean-to house and one that is partly sunk in the ground for this purpose, as such is more snug and less draughty than if built on the surface, while it also tends to economise fuel during cold weather. The interior of the house should be made clean. A good start with a clean house and good healthy plants at the outset will go a long way to keep matters right if cultural details are properly attended to; therefore the thorough cleansing of the structure cannot be too strongly emphasised. In the meantime sow seed and raise the requisite stock of plants, which should be grown well up to the light to prevent them becoming drawn.

**LATE-KEEPING GRAPES.**—Now that all danger of scalding is past, houses in which Lady Downe's is grown may be again syringed and damped down daily. Look to the borders, and if these are approaching a dry condition, water them sufficiently to moisten them down to the drainage, and give a stimulant at the same time. When scalding ceases to prove troublesome, we then know that the stoning process is completed, and that it is, therefore, now safe to finally thin out the berries in all bunches where they are as yet too thick. Each berry should have ample space not only to allow them to grow to a large size, but also to allow of a free circulation of air through the bunches, as in many instances these late Grapes have to be kept until the ensuing spring. Varieties other than Lady Downe's, such as Gros Colman, Alnwick Seedling, and Black Alicante, the berries of which attain a very large size, must be extra well thinned, otherwise they will bind at the finish, and then if a berry should happen to decay, those immediately surrounding it will very likely become affected before the mischief is detected. Look the Vines over about once a week, and keep lateral growths pinched in until colouring commences, when they may be allowed a little more latitude. On bright, warm days the house may be closed about 4 p.m., or early enough to run the mercury up to 90°, and to prevent the temperature falling too low at night, turn on a slight amount of fire-heat. When the weather will allow, a chink of air put on in the morning and allowed to remain on until the following morning does much good by affording the Vines a certain amount of rest, but it is best taken off at 6 a.m., and the house should then be ventilated, after damping down, in the usual manner. During such hot weather as that we have lately experienced the front ventilators need to be opened to a certain extent, but until colouring becomes general they should not be used too freely.

**PINES.**—The plants which will afford ripe fruits during the autumn months will need a considerable amount of attention in the way of watering, feeding and syringing in order to keep the fruits swelling. Other details, such as keeping the fruits in an upright position and pulling off suckers with the exception of one at the base, should be attended to, and afford the plants a sufficient amount of shade during the hottest part of the day. Plants started as advised when last writing about Pines will now be showing for fruit, when more water may be given at the roots, but unless the condition of the plants should demand it, withhold stimulants until they have done flowering, when they may have guano water each time they require watering right up to the time the fruits commence to change colour. Successional plants or those intended for spring fruiting should be encouraged to make free growth so that the same may be completed and the plants got to rest early in the autumn. These and later batches may have the benefit of guano or liquid manure each time watering is necessary until growth is finished, when in order to keep them in a quiet state through the late autumn and winter months, no more water must be given than will keep the roots and foliage in a healthy condition. Many err in keeping these plants too dry, and a greater mistake cannot be made, as numbers of the roots perish when subjected to such treatment. These should, if possible, be preserved, as they

prove of the utmost service when the plants come to be started at the beginning of the year. To keep up a good stock of plants continue to take off and pot up all available and likely-looking suckers, and if any of those taken within the past two months are well rooted give them a shift into larger pots at once rather than allow them to become pot-bound.

**SOILS.**—Where much fruit growing is carried on there is, as a matter of necessity, a great demand for soil of a suitable description to grow the various subjects in. This is best dug at the present season, as the carting of the same can be the more expeditiously carried out while the surface is in a dry and firm condition. The turves should not be cut less than 2 inches or more than 3 inches thick, and should also be as full of fibre as it is possible to obtain them. Old sheep pastures or the top spit from a deer park generally affords the best soil for this purpose. When much loam is required, steps should be taken to get the bare surface green again as soon as possible by scarifying and sowing it down with grass seeds. Neglecting to do this often leads to consent being withheld when next loam is required.

A. W.

### KITCHEN GARDEN.

**WINTER SALADS.**—The season has arrived when sowings of both Lettuce and Endive should be made for standing through the winter, or rather to furnish supplies during the greater part of it, other sowings being made later for spring and early summer use. Both Hicks' and Goldring's Cos varieties are very hardy and suitable for present sowing, though as a rule good blanched hearts are not produced until the spring. For mixing in salads, however, the young tender centres are generally preferred to those of the Cabbage varieties, as the latter are apt to flag and become tough after they have been cut a short time. A good-sized bed of each kind should be sown, as it is seldom the stock of plants is too numerous say after midwinter. Rich ground should be selected, dug deeply, and well broken to pieces, and the seed sown thinly in drills after the soil has had time to settle. Much time is lost before the seedlings become large enough for transplanting if they are not frequently watered during dry weather. In the meantime the site selected for their winter quarters should be prepared, so that all will be in readiness by the time the plants are large enough for putting out. South borders are generally given up to Lettuce and Endive, as they can be cleared off in time for sowing and planting early spring crops. A good dressing of manure now will not only assist the current crop, but the soil will be in good condition for most things next spring without any addition, especially for early Carrots. It is better to have the ground prepared a week or so before it is required, which not only allows time for it to settle naturally, but several light dressings of wood ashes and soot can be afforded before the plants are put in and there is less danger of their being attacked by slugs. Other positions, such as the foot of warm walls and other sheltered nooks, should also be got ready either for sowing a pinch of seed or for pricking out plants. To maintain a continuous supply of first-class salad throughout the winter, pits or frames become a necessity. These probably at the present time will be occupied with Cucumbers and other things, but any that are available should be prepared to receive as many plants as possible of both Lettuce and Endive. Where the frames have frequently been used for French Beans, &c., and the surface-soil has sunk a foot or more from the lights, more soil should be added, or in some way raised so that the plants will not be more than 9 inches from the glass during the winter. A few inches of fresh loam, with some spent Mushroom manure and wood ashes added, will greatly assist the plants to make stout foliage and better able to withstand severe weather. Among the Cabbage varieties for winter use there are few better than Lee's Immense Hardy Green when a true stock is

obtained. This variety finds much favour, I believe, with the large market growers. All the Year Round, Brown Dutch and Victoria are also excellent for autumn sowing.

**TRIPOLI ONIONS.**—A piece of ground should also be prepared for a sowing of these. By sowing the seed not later than the middle of August, sufficient time is allowed for the plants to become strong before winter sets in. Rather rich ground and a firm root-run are most desirable, as the plants are often lifted out of the soil by frost when the ground is loose and porous. It is not advisable, therefore, to dig in a quantity of partially decayed manure previous to sowing the seed, but a dressing of soot, lime, or wood ashes may be given, or if the ground be poor, a light one of fowl manure may be used. When the ground has settled somewhat, go over it and make it firm by treading, form the drills 9 inches apart, and sow the seed thinly.

**SPINACH.**—It is seldom this is too plentiful during the winter, neither can one sowing be trusted to yield the best results. Plants from seed sown in the middle of August often become too far advanced, should the weather be showery, to stand well through the winter, while seed put in at the same date may remain in the ground weeks before it germinates, owing to the want of moisture, and the plants will not be strong enough to withstand a hard season. A piece of ground that is in good heart and also in an open position should be selected. This should be forked over deeply and the seed sown in drills not closer than a foot apart. Another sowing should be made ten days later, and should there be any fear of neither of these not suiting the season, or being too forward, do not hesitate to put in more seed, as it is an easy matter to destroy the forward batch if not required. A great thing in preparing the plants to withstand hard weather is to thin them well out in the autumn. This allows room for the foliage and roots to develop, and stronger plants are obtained than would otherwise be the case if they were crowded the same as summer supplies.

**TURNIPS.**—This is another important winter crop, and if the sowing season is put off a week or two too long, it may mean a scarcity of roots not only through the winter, but well on towards the following summer likewise. In the midlands I found about the 15th of August a suitable date for sowing, but here I find a little later is better. Much, however, depends on the season, and, like Spinach, it is well to be prepared for making two or more sowings rather than run any risk of there being a scarcity. Ground cleared of second early Potatoes will be suitable for this crop, but it should be in a fairly good condition, or the seedlings will become starved, especially if there is an absence of rain, and more than likely suffer from fly attack.

**GENERAL REMARKS.**—The great heat together with a scarcity of rain in many parts has seriously affected different crops, especially such as Beans, Peas, and Cauliflowers. Each of these has received copious waterings and the soil between them has been mulched. Now that both French and Runner Beans are becoming plentiful, daily gatherings should be made, and none of the pods allowed to remain on the plants to form seed, or the supply will soon fail. The gathering of all vegetables, especially if they have to be packed and sent long distances, should always be done in the early morning if possible, especially during such hot weather as we have recently experienced; their quality as well as appearance is greatly improved thereby, and they last longer in a fresh condition. A good portion of Parsley which was sown in the spring should be cut over during dull, showery weather, and the new foliage which forms will stand better through the winter than that which was made earlier in the summer. Another pinch of seed may also be put in after the first shower, and the plants well thinned out as they come through the soil. These will furnish welcome supplies towards spring.

Goodwood.

RICHARD PARKER.

## FERNS.

### LOMARIAS.

This genus includes some beautiful and distinct species; there are also some good varieties of garden origin. The best known and most generally useful of the family is

**LOMARIA GIBBA.**—This is grown extensively for market, and though perhaps not so popular as some of the Pterises, it finds many admirers. There are several distinct forms of this, varying considerably in habit and size of fronds. The variety with pale green medium-sized fronds is one of the best, as it forms a compact plant and is not so prone to throw up fertile fronds prematurely as some are. The variety platyptera appears to originate from this. Although I have frequently sown what appeared good spores of platyptera, I have never succeeded in getting seedlings, though when raising the first-named I have several times had some plants of platyptera appear among them. In appearance this closely resembles one of the Blechnums, producing large, rather erect-growing fronds of a rich green, with no sign of red in the young fronds. There is also another good variety of strong growth, with a distinct bronzy red tint in the young fronds. To grow *Lomaria gibba* successfully the seedlings must not receive a check in any way from the time they are started until they have attained a useful size. Spores are rather uncertain in germinating, but when they do start they usually come up very thickly. The spores should be saved from plants grown in an open, exposed position, and old plants are usually more prolific than young ones. After seedlings get a good start, if potted in a light compost and given a good heat they soon grow on into useful-sized plants. They like a rather moist atmosphere, but not too much wet at the roots. A dry atmosphere will be sure to result in thrips making their appearance.

**L. CILIATA** is an old favourite, but not often seen now. Some two years ago I grew a fine batch, which proved quite as useful as *gibba*, but it does not usually furnish so well. Among a batch of seedlings of this I have had two very distinct varieties, one of which has received a first-class certificate from the Royal Horticultural Society. This bears a somewhat similar appearance to *ciliata* as *platyptera* does to *gibba*. It is named *L. ciliata grandis*. The basal fronds are broad and smooth, and the fertile (or rather semi-fertile) fronds are erect, crenulated, slightly contracted, but not so narrow as the ordinary fertile fronds of the species. *L. ciliata major*, which received an award of merit, more nearly resembles the parent, but is of a more robust habit, the basal fronds broad and spreading, the fertile ones growing more erect and contracted, as in the species. Should the former of these two varieties prove abortive, we may hope to get some good things from the latter, which has every appearance of maturing perfect spores.

**L. CYCADIFOLIA**, which is sometimes described as a variety of *Boryana*, is very distinct, the fronds being of a thick, leathery texture. When seen at its best it is very handsome, but unfortunately it is hard to manage, being liable to die off without any apparent reason. I have raised seedlings, but it is perhaps more difficult to get matured spores than to raise them.

**L. DISCOLOR BIPINNATIFIDA.**—This is one of the finest of all the *Lomarias*; indeed, it may be considered one of the handsomest of all Ferns; the beautiful feather-like fronds are gracefully recurved, and of a peculiar fresh green. Like many other garden varieties, it is difficult to get good spores. I have only known one instance of spores germinating, and among the plants raised there was great variation, some being quite equal to the parent, while others represented *nuda* and *falcata*, besides other intermediate forms.

Other *Lomarias* worthy of note are *L. attenuata*, the greatest attraction being the delicate shade of rosy pink in the young fronds, and *L. PHerminieri*, a delicate little Fern, the young

fronds having a very bright red tint. All the *Lomarias* require careful treatment, and when well managed they have few rivals among our cultivated Ferns. A. HEMSLEY.

KITCHEN GARDEN.

A HEAVY CROP OF POTATOES.

BEFORE the rains fell, or up to July 19, Potatoes in this district were "giving out" fast, and the greater portion would soon have matured prematurely. As it is I am afraid the crops in most gardens will be unsatisfactory, the rain not having come soon enough by at least a fortnight. As yet I have heard of no complaints of rot-tuberation, but fully expect that will be the effect of the late downfall. At Longleat, in Wiltshire, the Potatoes were looking remarkably well before the rains came. They had not ceased growing strongly in fact, and there is every likelihood of the crops being heavier than usual—a hot season suiting crops on a clayey soil. Having seen Potatoes on the same ground—a plot outside the garden walls, with Apple and Pear trees distributed about it—for several years in succession, I enquired and learnt that there had not been a change of crop for the past twenty years. I grew Potatoes for twelve years in succession on the same half-acre of ground, and the last crop was the best of all, but at Longleat Mr. Trollope easily beats my record. Bruce is the variety principally grown, and the estimated yield is 4 bushels to the "lug," as a square rod of ground is termed in these parts. Of late years that has been the average yield, and as before hinted, there is a good prospect of an exceptionally heavy crop this season. No solid manure of any kind has been used on the ground for years, but the Potatoes get the benefit of equal parts of mineral superphosphate (soluble phosphoric acid), kaimit (potash), and either nitrate of soda or sulphate of ammonia (nitrogen), carefully mixed and applied at the rate of one hundredweight to 20 square rods of ground—that is, 8 hundredweight to the acre. For medium and light soils nitrate of soda is recommended, but for clayey ground, sulphate of ammonia is to be preferred. This manure promotes a strong, but not gross growth of haulm, and when used for The Bruce, Magnum Bonum and other disease-resisting varieties, spraying with the Bordeaux mixture as a preventive of disease is uncalled for and may easily do more harm than good. I.

Somerset.

**Good dry weather Lettuces.**—Those who have a difficulty with summer Lettuce may with advantage try the Bath or Brown Cos. This will stand heat and drought better than any Cos variety I have grown. Sown monthly from April till July it is a superb variety, and the later sowing gives a long autumn supply. The best Cabbage variety is Continuity. This, like Brown Cos, is a dark-coloured form, and stands heat and drought better than any light kinds, needs the same culture as advised above, and remains fit for use a long time. It is a close, compact grower, and of good quality. There are other coloured forms, but the two above named have this season been my best, and it was the same last year with long drought and heat.—G. WYTHES.

**Tomato Carter's Outdoor.**—This Tomato is worth noting as exceptionally valuable to those who have a lot of fruit to supply as early as possible, and yet have hardly any facilities for indoor culture. With the view to thoroughly test its claims as an outside variety, I sowed it this year in pans early in March in a cool house and planted it out about the middle of May in a sheltered spot, the only protection given being a Seakale pot over each plant if the nights threatened to be cold. The first fruits were gathered July 16. Although not quite up to the Perfection type in smoothness and regularity, it is an evenly-shaped

fruit, a prodigious cropper, and of vigorous constitution. Its chief merit, however, and one that will make it a general favourite, is the quick setting and ripening.—E. BURRELL.

**Broad Beans and drought.**—Broad Beans, though looked upon as a common vegetable, are liked by many people. In seasons of drought the plants are often so badly attacked by fly that it is difficult to provide supplies in succession. The best preventive is to sow under a north wall for later crops or even under trees in a fruit garden if the trees are not too close; but even when treated thus there is a difficulty in preventing the Beans turning black and getting tough skins. It is this latter which makes Broad Beans disagreeable to many palates. There is a simple remedy, that is after the Beans are shelled, to remove the outer skin, this being of a greenish white, often tough and hard, and of a disagreeable taste. This, when removed, makes the Bean young, as it were, green, and tasty. I admit it needs a little patience to remove the skin from each bean or seed, but it is work well repaid, and this vegetable treated thus is much nicer. Broad Beans of late have increased so much in height, size, and number of beans in a pod that a quantity can soon be shelled. The skinning advised is not so tedious as many would think, especially when the quality is so much improved.—G. W.

**Pea Veitch's Goldfinder.**—For the past twelve years or more this variety has been grown in the West of England, giving the greatest satisfaction to all lovers of good Peas. It was sent out by Messrs. Robert Veitch and Son, Exeter, and was submitted by that firm to the Royal Horticultural Society for trial at the Chiswick gardens this season, for the first time presumably. It was thought to be merely either the true, or a well selected stock of that deservedly popular variety Ne Plus Ultra, and was passed over accordingly. As it happened what we may reasonably suppose to be the true stock of Ne Plus Ultra was growing on the same plot of ground for the purpose of comparison, and this row suffered considerably by contrast with that of Goldfinder. The latter was producing much the better crop of well-filled pods, but still was not considered distinct enough to entitle it to an award of merit. Undoubtedly the Ne Plus Ultra is the best type of main-crop and late Peas we have. No other type better withstands extremes of either drought or wet weather, and if the pods are not long enough to win prizes, their contents never fail to please the cooks and those they cater for. If, therefore, Goldfinder is only a good stock of Ne Plus Ultra it deserves to be recognised as such, and it will most certainly be popular long after showier certificated varieties have had their day and are forgotten.—W. I.

**Lettuces.**—Whilst we have so many varieties of Cabbage Lettuces, there are few really distinct Cos forms. The best known of these are Paris White, often found under numerous diverse names; Hardy Green Cos, very useful for winter work; Champion Cos, a tall pale green form similar to Ivery's Nonsuch, and far from being a reliable variety, but when well grown very large; the Black Seeded Bath Cos, so good too for winter growth, and the white seeded form which is much grown for winter use, but generally hearts so indifferently. A good stock of the Paris White, and that is generally found good now, and the black-seeded Bath Cos are the best and meet all requirements. Cos Lettuces have been very good this season where the ground has been well prepared for them, very rarely have I seen premature bolting stocks, and these may have been largely the product of bad treatment in the early stages of growth. As to Cabbage forms they seem to be legion, yet these may be reduced to smooth green, smooth red, and rough or curled of both colours, and usually large inclining to coarseness. Most of the varieties are good in their way, but all depends very much on treatment. Those stocks which stand well before running off to flower are best, but long standing is usually obtained at the expense of crispness of leaf and absence of flavour. To have Cabbage Lettuces good it is needful to sow seed

in small quantities often, so that the hearts may be fresh and crisp. It is rather surprising that the practice of laying thin canvas over the plants in the day does not prevail generally, as exposure to hot sunshine soon toughens the tender leafage, and also induces quick bolting to flower. Shading to keep the hearts cool is a most desirable feature, as the shading is then so much sweeter and crisper.—A. D.

**Late Broccoli.**—There is a conflicting opinion respecting the merits of Late Queen Broccoli by your correspondents Messrs. T. Cockerill and G. Bolas—on page 4 (July 3). The variety has been a universal favourite now for several years, so that to extol its merits seems altogether unnecessary, because so well known to everyone. This may account for the remark made by Mr. Bolas that he finds no reference to Late Queen when late Broccoli notes are perused. Mr. Cockerill evidently has not had the true stock of this estimable variety if, as he says, it turns in about the end of April or early in May, because its season extends from the middle of May until the same time in June. Seeds of this variety which I had obtained from a local source turned in at the time named by Mr. Cockerill, and showed characteristics altogether opposed to the true variety. This in my case turned out very convenient, because the past season's Broccoli crop was very erratic, and but for the early maturity of the so-called Late Queen, I should have been without any supply. If, however, I had depended solely on this for the end of May there would have been a considerable break between these and the early Cauliflowers, more especially so this year, when the latter were quite a fortnight late. Mr. Cockerill does not say, but I presume he alludes to Carter's Champion and Gilbert's Universal as being so far in advance of Late Queen. The true stock of Late Queen I have always found one of the most reliable and hardy of Broccolis, and, as far as my memory serves me, your correspondent is the first to under-estimate so valuable a variety as Late Queen. I cannot believe that he has based his convictions on experience gained from growing the true variety, which is very dwarf, distinct in foliage, very hardy and late—that is, when sown, as it should be, in May. Sutton's Bouquet and Model are two other favourites of mine for late cutting. They are both very hardy.—W. S., *Wills*.

TWO NEW VARIETIES OF POTATOES.

SOME friends of mine, enthusiasts in raising and cultivating new varieties as well as in growing the best old sorts of Potatoes, have spent years in the pursuit without having succeeded in introducing a variety of any real commercial value. Exception to this rule, however, must be made in favour of Mr. G. Wythes, who without being a Potato specialist has yet succeeded in raising at least two varieties of sterling merit and well worthy of a trial in most gardens. One, named English Beauty, was the result of a cross between Myatt's Prolific and Beauty of Hebron, and combines in itself the good qualities of both of these old favourites. It has the "Beauty" foliage, and the tubers resemble those of that parent in form, but are not so large, and are also white in colour. No fault can be found with either its cropping powers or the quality of the tubers when cooked, and seeing that it is as reliable as Myatt's Ashleaf on most soils, also maturing early, this variety should prove valuable alike to the private as well as market grower. What pleased me even more when at Syon was the grand breadth of Syon House Prolific there growing. In this variety we have a really good disease-resisting, heavy cropping Potato, that is destined to take the place of Bruce, Magnum Bonum, and the like in both private and market gardens. It was the result of a cross between Sutton's Seedling and Hinton's Prolific, a local variety of good repnte, but the growth more nearly resembles that of the Bruce, and is of a decidedly disease-resisting character. When well grown a sack of tubers to the square rod may

safely be anticipated. The tubers are moderately large, pebble-shaped, with few eyes, a rough skin, and quite handsome enough for exhibition. It is said to keep admirably, and has been proved to be of excellent quality when cooked. Grown in the Royal Horticultural Gardens, Chiswick, in 1895, and again in 1896, it was among the limited number selected for an award of merit. Both novelties were distributed by Messrs. J. Veitch and Sons last winter, and will therefore be well within reach of most growers next planting season. W. I.

**Potato Sharpe's Victor.**—With regard to "D. T. F.'s" note (p. 45), I must confess I may have omitted to green my seed as much as "D. T. F." would have me do. The two bushels of seed I had from a trustworthy source were not greened as much as my critic would advise, in fact, I fear they may have been similar to those in the heap he condemns. The seed was purchased from a large grower, and possibly he is unable to keep his seed Potatoes in thin layers. I am aware the tubers are best exposed before housing, but I do not place the failure to the greening. Why should Sharpe's Victor need special greening? I stated that others with the same treatment had not deteriorated, one I had twenty years, and I think loss of vigour was the cause of failure. On the other hand "D. T. F." quotes Mr. Cockerill's success (p. 4), and nothing is said as to whether he greened his seed, but he does not feed. I do feed, and my early crop in such seasons as we have just passed through would cut a sorry figure if I did not feed in a poor soil, not 18 inches deep, but 9 inches in some parts, not on rock but on gravel. I am obliged to differ from "D. T. F." on these points. I think "D. T. F." places too much importance on greening, as, if the skin of the tuber is sound that is what is needed. I thoroughly agree with him as to size of seed. It is necessary to have good sized seed, but I fear many cannot say Sharpe's Victor is a sure cropper and of the highest quality. I could name half a dozen early kinds superior. I do not think "D. T. F." can have given Ring-leader a fair trial, at least side by side with Sharpe's Victor. A few seasons ago, in fact, before the advent of Ring-leader, I noticed Victor less satisfactory than it should have been. This year I have several far superior to Victor in every way.—S. H.

## FLOWER GARDEN.

### ROMNEYA COULTERI.

THERE are few flowers more beautiful than those of this Californian Tree Poppy. The blossoms are so simple in form, so exquisitely delicate in the substance of their petals, which at first sight remind one of the finest white crêpe and flutter at the slightest breeze, their purity enhanced by the great golden boss of stamens from which they radiate. Many of the flowers are 6 inches and more in diameter, and when a dozen are open at one time form a wonderfully attractive picture. They also possess the additional charm of fragrance, and, indeed, in their qualities of perfume, form, and colouring are very near perfection.

The plant, though it does well in the south-west of England, can scarcely be deemed absolutely hardy even there, several specimens having been killed by the severe frost of two winters ago. A certain amount of protection is desirable, but undue coddling often leads to the plant rotting to the rootstock, and so perishing. It was suggested to me a short time since that Pine needles would form the best winter mulch for this subject, and I have no doubt that they would prove a most efficient protection, holding no superfluous moisture and allowing the air to percolate through them, whilst they kept the frost from entering the ground. I have found

the *Romneya* very impatient of root-disturbance, and have lost several seedlings in shifting them on, though this operation was most carefully performed. When plants have been put out in the border they have lost most of their leaves, though the ball of roots was left intact. When once established in the open ground, however, they grow strongly, the plant which the accompanying illustration represents having in two seasons attained a height of over 8 feet, and having increased considerably in size since the photograph was taken in the summer of 1896. The seeds of the *Romneya* take a long while to germinate. In one case ten months elapsed before signs of growth appeared. The plants may also be raised from root cuttings and layers. When growing in the rock garden it often sends out shoots at some distance from the parent stem, and only the other day I noticed a case where one such shoot had been taken off and planted in a neighbouring border, where it was flourishing finely and appeared to have relished rather than resented the root-disturbance involved in its removal. Probably the most advantageous site for *Romneya Coulteri* is a sheltered one backed by a wall, which enables rough protection, in the shape of a sus-

colour is most effective, especially when made up into a spray. In the flower garden it is equally striking, but must not be placed in the full sun. In the latter position the top petals very soon get scorched. In any position in which partial shade can be afforded all will be well. It is an excellent sort for both early and late displays.—D. B. C.

**Primroses and Polyanthuses.**—There has been a very good harvest of seed of these this year and the sample is excellent. Those who are wise will not leave sowing until the spring, as in the interval not only will the seed shells harden, but the germ will have dried up and become worthless. It is because of the long keeping of these seeds that so many failures occur from spring sowings, or if not absolute failures, germination at least is irregular. It is best, so far as practicable, to sow as soon as the seed has ripened. It is well all the same not to sow in the open ground until the chief summer heat is over, and for preference to sow about the middle of August. If the weather then be dry, a small bed may be prepared by well forking and cleaning it, leaving it a bit rough, then giving over-night a good soaking of water. So treated, next day the soil will break down well with a coarse rake. The seed should then be sown thinly, be well raked in, then lightly watered, and at once covered up with mats. If heat and drought continue, one



*Romneya Coulteri.* From a photograph sent by Mr. S. W. Fitzherbert, Torquay.

ended mat or other material, to be more readily and temporarily supplied than where the plant stands altogether in the open. The last two winters have been so mild, that even plants in the latter position have passed through them uninjured, but like immunity cannot be counted on during succeeding years. When in full growth the *Romneya* delights in an ample water supply. Up to the present time I have not obtained thoroughly ripened seed from plants grown in the open air. S. W. F.

**Tufted Pansy Magie.**—This is one of the 1896 novelties, and it has evidently come to stay. Several handsome sprays shown at the meeting of the National Viola Society doubtless assisted very materially those who used the variety. The flowers are rich rosy-crimson, of large size and freely produced. The growth is free and it is also fairly compact. We have no other Tufted Pansy of a similar shade of colour.—C. A. H.

**Tufted Pansy Sheelah.**—This is a pretty flower, and one which has suffered very much from the trying heat of the last few weeks. The colour is best described as pale rose with deep crimson centre and a neat yellow eye. This

or two waterings may be needful to keep the soil moist, covering up again at once. Germination is then quick and even. The mats may now be removed and the plants will become strong and sturdy, rooting deeply and will stand the winter admirably. Then if lifted carefully and planted out the following April they will produce huge clumps to bloom during the succeeding winter and spring.—A. D.

**Tufted Pansy A. J. Rowberry.**—It is a matter for regret that this handsome kind does not possess a better habit. We have no other Tufted Pansy of so deep and rich a golden yellow. The flowers are of large size and, except very early in the season, absolutely rayless. The constitution of this variety has over and over again been described as anything but robust, but I am inclined to think differently. My plants were all rooted outdoors without any artificial protection and on a raised bed with a northern aspect. Here they remained right throughout the winter and until spring planting commenced. Some of the plants were planted out in beds in the ordinary way, and as these beds were a piece of pasture land the previous summer, I anticipated trouble from the wireworm. All this batch has done well. In order, however, to prevent the total loss of this variety, which I quite expected would be the case if I trusted entirely to the

plants in my new piece of garden, I made up a series of rough frames without frame lights. With other varieties A. J. Rowberry was accorded a place here, and, except for a good mulching with rotten manure in June and an occasional watering during very hot weather, nothing exceptional has been done. At the time of writing I have a capital batch of this variety in the most robust condition. Does not this point to the fact that over-propagation in its early history is largely responsible for a weakened constitution during the first year or two of its existence? Many seedlings from this variety have recently been raised, and we may hope to get an equally good flower on a dwarfier plant.—GROWER.

#### BORDER CARNATIONS.

AMONG the many objects of interest that came under my notice during a short tour among gardens near London, none gave me greater pleasure than the beds of border Carnations to be seen at each place I visited.

##### SYON HOUSE.

It was at the Syon Gardens, however, where the finest display was made, and I was, fortunately in time to see them before cutting commenced for an extra large garden party, cut Carnations playing an important part in the decorations of reception rooms, tents, and the like. Last autumn Mr. Wythes planted ten beds, each 50 feet long and 4 feet wide, wholly with Carnations, and with few exceptions all have done well. Such well-known favourites as Ketton Rose, Duchess of Fife, Countess of Paris, Mrs. Muir, Gloire de Nancy, Pride of Great Britain, Germania, Raby Castle, Mrs. Reynolds-Hole, Uriah Pike, Leander, and Redbraes were all extensively represented, and were flowering grandly. The Old Clove was in better condition than I have seen it for a long time past. Either the treatment given suits this old favourite, or else Mr. Wythes has got hold of a superior form, for I noticed that the grass was exceptionally healthy and strong, and also that the blooms were large, of good form, without the usual bursted calyces. The beds of Douglas' strain of seedlings comprised a good percentage of really attractive varieties, superior, in fact, to many named sorts cultivated with far greater difficulty in gardens generally. Mr. Wythes believes in young plants of both seedlings and named varieties, also fresh soil, early planting, early mulching with old Mushroom-bed manure, and timely staking. In point of numbers, the seedling Carnations at

THE ROYAL HORTICULTURAL GARDENS, CHISWICK, come next, and as these are also all raised from seed supplied by Mr. J. Douglas, it need hardly be added that the strain is much above the average. In reality the variety is remarkably good, plenty of the plants fully deserving distinctive names and to be perpetuated by layering. The yellows are very handsome and among the most valuable, but there are also many good white, red, pink, and crimson forms, the blooms being extra large, yet not coarse, and borne erect on stout branching stems, while the foliage in some instances is nearly, or quite, as broad as that of a Malmaison. Mr. S. T. Wright has been very successful with this large batch of Carnations and is to be congratulated accordingly. At

##### GUNNERSBURY HOUSE

Mr. Hudson usually succeeds well with everything he takes in hand, and his grand bed of border Carnations does not suffer in the least by comparison with the other displays just previously commented on. Once more Mr. Douglas' strain has been favoured, and the same excellence in variety, habit of plants and quality of bloom is observable here as elsewhere. It is also worthy of note that fully 90 per cent. of the seedlings are double-flowered, and anything better than that cannot be guaranteed either now or probably in future years by florists generally. If I remember rightly, Mr. Hudson is an advocate

of rather early sowing. When the seed is sown in February it germinates more surely in heat than it does in March, with its trying bursts of sunshine, and quite as many plants are obtained from 100 seeds as when the seed is sown in a warm frame in April. Then, if the early-raised seedlings are properly treated, or not allowed to remain longer than is good for them, either in heat or in the seed-pans or boxes, grand plants are ready for the beds in July. When raised and planted out thus early it is astonishing what a number of blooms a single plant will produce the following summer. Hundreds instead of dozens are the order of the day, in fact, the plants in July are literally all bloom, little or no grass being formed, hence the necessity for raising a fresh stock of plants from seed every season. Beds of seedlings representing a good strain are far more pleasing to those growing them than the more formal display of named varieties, a lover of flowers finding much to admire even in the singles, and the expenditure, either in money or labour, is far less than in the case of forming and growing a collection of named sorts.

W. IGGULDEN.

#### WHITE TUFTED PANSIES.

ONE could not help noticing the marked advance made in the white forms of these beautiful hardy flowers at the recent exhibition of the National Viola Society. Preference certainly was given to those of the rayless type of the flower. A variety distributed last season under the name of Nellie was often in evidence. This is a very large flower, of beautiful form, pure white, with a small, neat orange eye. As a plant for garden decoration it is deserving of extended culture; its growth is vigorous, yet free from coarseness, and it is an ideal sort for the flower garden. It is also very free-flowering. Another variety seen in excellent condition in several stands was White Empress. This is one of the very latest introductions; the blossoms are very large and circular, the lower petal being somewhat cupped, thus giving a finish to the flower. It may be described as pure white, and, like the last-named variety, has a neat orange eye, the centre also being free from rays. Although a strong-growing sort, it is very compact in its growth. Several plants in pots were greatly admired. It does not appear to be quite so free-flowering as the variety Nellie. One of the best of the white flowers, however, was Christiana. This has a large orange-yellow centre or blotch on the lower petal, which enhances its appearance considerably. The flower is oval in shape and its form is distinctly good. As a type of what a Tufted Pansy should be, this is an ideal plant. The growth is beautifully dwarf and spreading, and it is also free-flowering. A variety with somewhat smaller flowers, yet very refined, was Ethel Haneock. The flowers are much whiter than those of most other white sorts and they have a rich yellow eye; the growth is compact and strong. A pretty flower was Devonshire Cream. As its name implies, this is a creamy white flower with orange centre. The habit is excellent and the growth wonderfully free, yet compact. A lovely spray of Vestal—one of the purest white Tufted Pansies in cultivation—was much admired. This is another of Dr. Stuart's gems. The flowers are of medium size, but they are refined and chaste, qualities generally characteristic of this raiser's flowers. The northern growers seem to have a partiality for large-rayed flowers, which did not for a moment compare with the smaller rayless blooms staged by their southern rivals.

D. B. CRANE.

**Campanula Hosti alba.**—Among the white Bellflowers this is perhaps the most worthy both for its wonderful freedom as also the numerous sprays of its pure white flowers. In a soil that is deep and rich it is doubtful whether we have any more beautiful or graceful subject for either the rock garden or border. Indeed, it is delightful anywhere provided an ample supply of moisture

is maintained during growth and flowering. Many years since, I noted this plant in excellent condition in the midlands in a rather stiff and moist clay, so moist, in fact, that *Primula japonica* was in the greatest luxuriance quite near. Some small plants of this kind were noted recently at the Drill Hall, but in small (3 inch) pots they give not the least idea of their beauty. It is one of those subjects that well grown may safely be placed in the front rank among hardy flowers, but in a poor, dry, or shallow soil the true character of the variety is lost. In size and purity of flowers it is far the best of its section, and established plants will reach to 2 feet high, bearing almost endless sprays of snow-white blossom on slender branches.

**Phlox Coquelicot.**—I happened to be at Kew on the 17th inst. (the day on which the notice of this variety appeared in THE GARDEN), and I was so struck with the extraordinary vividness of its scarlet that I was on the point of asking in these pages whether anyone could tell me where it is procurable. As for its identity with Lothair, as suggested by the editor, I should certainly be disposed to negative any such proposition, although the way such names get mixed and misapplied makes it difficult or impossible for anyone to answer with real authority on such a matter. I grew (or believed myself to be growing) Lothair for many years here. It was a beautiful Phlox of a high colour and strong growth, and, if I recollect right, it was one of the first noticeable high-coloured Phloxes to be introduced, but it was certainly unlike and altogether inferior in the vividness of the scarlet (which is real scarlet) to the variety now under notice, which is to my mind a "new departure" in these magnificent florists' flowers. There are a good many fine varieties in the Kew collection which are evidently from a French source.—J. C. L.

**Meconopsis Wallichii.**—The Indian Poppies are among the handiest plants in flower at the present moment. To obtain the fullest development in these plants, seeds should be sown early in the year, say in February or March, the latter quite soon enough where slight warmth can be had for the seed pan. An important point is that of growing on the seedlings briskly from the first, as a check in any of the early stages prior to planting out is calculated to do serious mischief. From the seed-pan the young plants should be potted into equal parts of loam and sandy peat in pots 4 inches across, transferring to their permanent positions as soon as roots reach the side of the pot. To delay planting out is to court failure, as the pyramid of blossom in the year ensuing will be in proportion to the development of the plant in the first year. A deep and rather moist soil should be provided, planting a dozen or twenty plants in an irregular group at 18 inches apart. These the first season make handsome rosettes of leaves that are quite ornamental in themselves. Of this fine Himalayan Poppy a nice group is now flowering in the Kew rock garden.

**Marketing Arum Lilies.**—Having many thousands of splendid flowers growing on the margin of a large pond, I thought it might be worth while sending them to London for the Jubilee festivities, and wrote to a leading flower dealer at Covent Garden, who replied "that at present they were fetching from 2s. to 3s. per dozen, but send them up and we will do our best for you." I at once sent forty-eight dozen, for which, after paying carriage, &c., he sent me 17s. 2d., saying the flowers were very poor, &c. A few days after I sent a box of flowers to THE GARDEN office for their verdict as to quality, &c., and that verdict highly praised the substance and quality of both flowers and leaves. The flowers sent were superior in every respect to the sample sent to you. They were carefully packed in six cases each 36 inches by 22 inches and 10 inches deep, well lined with paper, with layer of leaves at bottom, and every flower fastened down to prevent the possibility of shifting. The cases, costing 1s. each, were never returned. There was no complaint of the packing or the condition the flowers arrived

in, only that they were poor in quality. The amount received for them was a fraction over 4d. per dozen, and this during the Jubilee festivities. I was so disgusted with the transaction, that I determined to let them rot rather than send another flower to Covent Garden.—W. SANGWIN, *Trettsick, Truro.*

### IRIS GATESI AND OTHER CUSHION IRISES IN HOLLAND.

IN No. 1039 of THE GARDEN, vol. xl., I had the privilege to be able to insert a short article on Cushion Irises, giving the way I grow this most interesting group of Irids in Holland. Contrary to the advice of some of the most eminent English growers, whose experience and great success in most other gardening problems cannot be over-estimated, I there urged the necessity of taking up the rhizomes of these Irises every season in order to give them that complete period of rest, without which no proper flowering can reasonably be expected. The rhizomes are taken out of the ground as soon as the foliage shows signs of having fulfilled its task; they are then gradually dried off and are not replanted until late in the season—end of November.

These are the main points of our method of cultivating this most captivating set of Irids, and that the said system of cultivation works tolerably well in at least my garden no one can possibly deny who takes a look at the accompanying illustration, which the editor has been good enough to reproduce from a photograph sent by me, and representing a portion of my beds of *Iris Gatesi*. This species is unquestionably the prince of Irises, and it is a really remarkable coincidence that Herr Leichtlin, the prince of modern cultivators, has also been the first to place this royal flower within the reach of all. The photo shows a large lot imported by myself three years ago, the rhizomes having been collected for me in the mountains of Southern Armenia. Naturally, the first season the plants were weak, my collector having been obliged to dig up the specimens when in bloom, and it was only the second season that a few blossoms were produced. This season when the photograph was taken there were about 400 noble flowers in full splendour, with at least as many more to follow, which the numerous buds shown on the photo can fully testify. At the time of flowering we had a few warm, sunny, perfectly still days, causing the flowers to open without the least injury, and in the brilliant June sun the whole literally represented a sea of noble silvery blossoms, a sight more magnificent than which it would be difficult indeed to find. The sturdy, partially leafy stems attained a height of some 2 feet to 2½ feet, and the stately blossoms measured in some instances more than 10 inches from tip to tip, the lip being 4 inches across. It is not only with *Iris Gatesi* that I have been able to chronicle a success; of the quaint and interesting *Wolff's Fur Iris* (*I. lupina*) at least seven or eight plants out of every ten produced flowers, more than 1000 blossoms having been counted open at once, nearly all clumps of *Iris Lor-*

*teti* and *susiana*, a great many of *I. Bismarckiana*, *Marie*, *atro-fusca*, *atro-purpurea*, and a number of own raised intermediate forms having flowered. The closely-related group of *Regelia* Irises equally well responds to the said method of cultivation, hundreds of spikes of *I. Korolkowi*, with its varieties *Leichtliniana*, *concolor*, and *venosa*, numerous flowers of the bronzy *I. Leichtlini* and of the interesting polychromous *I. Suwarowi* and *vaga* having been produced.

It is difficult, or rather next to impossible, to lay down fixed rules in any matter regarding horticulture, the climatal conditions, the nature and substance of the soil, and hundreds of other often unknown circumstances sometimes leading to a decided failure where one fully had expected to get a victory; but it is certain that in our climate, with our deeply-dug, sandy nursery soil, no other system of cultivating the Cushion Irises can be adopted

were fully shown. I had previously seen the kind, for it is a distinct species from the well-known *speciosa*, growing in boxes as raised from seed at Long Ditton. There I found both deep blue and pure white, and also reddish tints, such as we have previously seen in the *speciosa* section. The plants do not seem to be of so branching a form as bedding *Lobelias* are, and, indeed, were largely used by Messrs. Barr and Sons for boxing, for which purpose the kind is admirably suited, not to hang down, but rather to intermix with other plants. This *Lobelia* will no doubt presently be largely used raised from seed for planting in mixed beds.—A. D.

**Coreopsis grandiflora.**—The tropical heat by day and cold parching wind by night have almost dried up everything in flower, but this plant is as fresh as ever. It is, in fact, a dry-weather subject, heavy rain soon spoiling the beautiful golden-yellow blossoms. These are produced very abundantly on long slender stalks, and are extremely useful for cutting. The pure white *Madonna Lilies* and this *Coreopsis* are a lovely combination in tall vases, while for small specimen glasses about five blooms of the *Coreopsis* loosely set and a sprig of *Maiden-hair Fern* are



*Iris Gatesi* in Van Tubergen's nursery at Zwanenberg. From a photograph sent by C. G. Van Tubergen, Junr.

which gives better and more encouraging results. C. G. VAN TUBERGEN, JUNR.

*Zwanenberg Nurseries, Haarlem, Holland.*

**Anchusa italica** is perhaps one of the best known of hardy perennials and also one of the freest flowering. It is worth growing for the display of colour, this among blue shades being most intense. Large plants produce a fine effect. In common with many Borage-worts, this plant may be freely increased in a variety of ways—seed, division, or root cuttings, the last a very quick method in this instance.

**Crinum capense** is now flowering freely, its strong spikes being nearly 2 feet high. The best position for this plant is in quite moist soil either in the bog garden or near the water's edge, where moisture may be assured. Moisture, however, or at least continuous moisture, is not absolutely essential, but in the growing season it requires it without stint, and, coupled with a deep rich soil, good results at flowering time will be had. The plants may be also grown in pots, and in the summer-time immersed half their depth in water.

**Lobelia tenuior grandiflora.**—The plants of this remarkably fine *Lobelia* shown recently at the Drill Hall by Mr. Ladhams were a little out of character, being rather drawn. In other respects the size and very flat form of the flowers

charming. *C. grandiflora* is a true perennial, but is easily raised from seed, and if the blooms are required in the best order it is as well to treat it as a biennial, sowing the seed in spring in boxes or frames, pricking out the seedlings, and later on planting in nursery beds, placing in their permanent places in autumn. In this way they throw a few blooms the first season, but the next year they form grand clumps 18 inches or more across, from which sheaves of bloom may be cut.

**Yucca angustifolia.**—In the Bamboo garden at Kew there is a large group of this *Yucca*, thriving admirably on a sunny sloping bank, and about a dozen of the plants are in flower. Although, according to "Nicholson's Dictionary," it was introduced in 1811, and there is a poor figure of it in an early volume of the "Botanical Magazine" (t. 2236), it is as yet one of the most uncommon of the hardy *Yuccas*. Yet the plant is itself, even without flowers, a striking and ornamental one. It does not form any distinct stem, but merely a crown near the soil from which springs a fine radiating mass of glaucous leaves, forming, as it were, a semi-spherical rosette. Each leaf is between 2 feet and 3 feet long, about three-quarters of an inch wide at the base, and tapers gradually thence to a long fine point, the margins beset with a few white threads, 4 inches or so long. The raceme is quite erect, averaging 4 feet in height, branching at the base, and the flowers are about the size

of these of *Y. gloriosa*, but not of so pure a white, the outside of the six perianth segments being strongly tinged with green. The species comes to us from Western North America, and is found in the states of New Mexico, Colorado, Iowa and Missouri. The dwarf habit of this *Yucca*, together with its striking appearance—so different from that of most hardy shrubs—ought to bring it into general cultivation. For rock gardens and sunny nooks it is especially well suited. —W. J. B.

#### GLADIOLI.\*

FIRST as to the question of soil. Nearly all writers on Gladioli recommend a light sandy soil as being the most suitable; in fact, some go so far as to make this an essential, and condemn heavy loams as being totally unfitted for the purpose. On what grounds they speak so decidedly I have never yet been able to ascertain, but I assume that, as Holland is a great centre of bulb growing, and as the soil there is mostly of a light and sandy nature, the writers in question take it naturally for granted that everything of the nature of a bulb or corm requires a light, sandy soil for its proper development, without ever putting the matter to the test. I have grown Gladioli in all kinds of soils and mixtures, and after careful consideration, have come to the conclusion that the best results are obtained on a somewhat heavy yellow loam of an adhesive nature, without any admixture of sand—a soil which I consider, if anything, even of too close a texture to grow Brier Roses in. On such a soil I am able year after year to keep up a vigorous and healthy stock of Gladioli, and, no matter whether the seasons be hot or cold, dry or wet, I have always a good measure of success in producing flowers and corms. Perhaps I ought to have stated earlier that my remarks have reference to the fine hybrids of the *gandavensis* section, and I think it may be taken for granted that whatever suits these, as regards soil and general conditions, will also suit the more recent *purpureo-auratus* hybrids and *Saundersi* varieties, and these three sections it will, I think, be admitted contain all the most beautiful late-blooming Gladioli worth cultivating for the beauty of their flowers. The actual species from which they have been obtained are poor things in comparison with the fine hybrids produced from them by careful hybridisation. In recommending a somewhat heavy loam for choice I know I shall be told that splendid flowers of Gladioli are produced in soils of a light, sandy, and even gravelly nature. I quite admit the fact, and I believe that as regards the mere production of fine flowers it may be done in almost any kind of soil whatever; but I should only consider a cultivator really successful when, in addition to fine flowers, he is also able to keep up a healthy stock year after year, and this is more likely, so far as my experience goes, to be attained in a good holding loam rather than in any other kind of soil, at all events so far as the drier and warmer counties of England are concerned. In the more northern counties, where the rainfall is excessive and the climate less warm and sunny, some modification of the foregoing opinion might be necessary, and a soil of a lighter nature might be found more suitable. But it is a matter of history how, when a clever gardener like the late Mr. Standish attempted to grow these flowers on the light sandy soil of Bagshot, he utterly failed to increase or even to keep up a healthy stock, and their cultivation had to be abandoned. Monsieur

Lemoine, on the other hand, has told us in his interesting lecture, delivered in this hall, how well he succeeds with his Gladioli in his nursery at Nancy, where the soil is stiff clay, and from which he distributes his hybrids in such rapid succession. And although it does not appear that the *gandavensis* hybrids flourish there on stiff clay, they succeed admirably with me near Cambridge on a soil closely approaching clay, but where the drainage is good and the rainfall light—an average of about 18 inches a year.

Closely connected with soil comes the question of

#### MANURE.

Excessive manuring is extremely harmful, and is likely to generate disease. Of this disease I will speak later on; but when I see recommended layers of 6 inches to 8 inches of manure, and mulchings of nearly the same, with frequent doses of liquid manure, I cannot help thinking it is greatly in excess of any of the requirements of Gladioli in a fairly average fertile soil, and I am sure that a portion of the manure and liquid would be much more profitably employed on some of the gross-feeding kitchen garden crops rather than in encouraging disease among the Gladioli. I mostly grow the bulbs, or rather corms, on ground which has been well manured for the previous crop, where, for instance, Dahlias or Roses have been grown the previous autumn, and this, I find, produces quite as good results as when I specially manured the ground for the Gladioli alone. An excess of humus in the soil is distinctly harmful, and the stock will remain far healthier in what is termed clean soil. My ground is manured with ordinary stable dung. I have at times applied moderate dressings of bone meal, fish manure, muriate of potash and other artificial manures, but all with doubtful results. I have sometimes given part of the stock a slight mulching with fresh straw litter, but have generally found those grown without any mulching to do equally well. I carefully avoid mulchings of close rank manures, and never employ liquid manure in any form whatever. Clean cultivation is the best.

Although the average rainfall is so light (not exceeding 18 inches), I rarely ever water the growing plants; in fact, they seem to prefer a dry spring and a somewhat dry, warm summer. The hot, dry summer of 1893, for instance, seemed to suit them to perfection, as the finest growth and flowers I ever had were produced in the early part of August of that year, when the plants had very little rainfall and great heat and no artificial watering. The extreme drought and dryness of the air during the present summer (1896) have been too great an extreme on the side of dryness, and the plants suffered during August from lack of rain and moisture in the atmosphere. Up to the end of July they never looked better, and were of wonderful health and vigour, but they appear to require a fair amount of moisture near the blooming period. That they prefer dry and warm conditions rather than those of an opposite nature seems to have been noticed by Dean Herbert in the earliest period of hybrid Gladioli. So far back as the year 1847, when writing of the greater hardiness of *psittacinus* (one of the parents of the present race of *gandavensis* hybrids) he goes on to state that it suffers much from July rains in many positions. With reference to the

#### FUNGOID DISEASE

which attacks the corms of these plants, and with which the whole genus appears to be more or less affected, no remedy for its complete eradication has yet been found. Various suggestions have been thrown out; amongst others,

that of breeding new races direct from the species, and some importance is attached to the re-introduction of *oppositiflorus*, a plant of considerable vigour. But I am strongly of opinion that the late Monsieur Souchet, the originator of the fine *gandavensis* hybrids, himself used *oppositiflorus*, or hybrids from it, in producing his earliest light-coloured varieties, and anyone continuing the work of raising seedlings from them will now and again have tall, light-coloured varieties springing up, with their flowers placed in opposite directions to each other, and all opening nearly at the same time, just like *oppositiflorus*, as some few others almost reproduce the typical *gandavensis*, although a great many generations removed from it. A Gladiolus with its flowers placed in opposite directions on the spike is a poor garden plant, compared to one with its flowers all facing in one direction, and I have no faith in going back to the species as a remedy for improving their constitution. As an instance of this I may mention that a hybrid was given to me for trial, a cross between a very vigorous variety and *Saundersi*, and this became so badly diseased the first season I grew it that it died outright soon after blooming, whilst many of the old hybrids raised more than twenty years ago, growing in the same bed and under exactly the same conditions, remained in vigorous health. There may not be much natural affinity between Gladioli and Potatoes, but both are plants more or less affected with fungoid diseases difficult to combat, and the latter serve the purpose of a good illustration on this point. Mr. Sutton, in his interesting lecture on the Potato delivered in this hall last year, related his experience of crossing varieties of Potatoes with some of the species of *Solanum*, without obtaining any good results in securing varieties proof against disease. Such, I think, would be the case with Gladioli, if we recommenced afresh from the species. As in the case of Potatoes, I would rather look to clean cultivation, and the selection of vigorous hybrids as parents, and the replacing of young stock to replace worn-out corms, as is done in the case of most garden plants. My own annual loss from disease barely reaches 10 per cent. Many people appear to have an idea that a Gladiolus should be propagated in the same way as a Narcissus, by the old bulbs increasing by natural division; and no doubt to a certain extent this is so; but this mode of increase invariably wears out, and it is to the young bulbets which cluster at the base that we must look for perpetuating varieties for an indefinite period. Otherwise named collections of Gladioli would not exist, where the stock of any given variety could be obtained by the hundred or thousand, as is the case with many varieties at the present time. A paper on Gladioli would hardly be complete without some reference to the

#### VARIOUS SECTIONS

of the flower. Many of the early varieties are pretty garden flowers; among these may be mentioned *Colvillei* and its white variety, known as *The Bride*, so largely grown for cut flowers; some few varieties of the *nanus* section and of the later summer-blooming *ramosus* section, followed by the fine hybrids of the *Lemoinei* and *Nanceianus* sections, which, thanks to the exertions of Monsieur Lemoine, have considerably prolonged the blooming season of Gladioli, as they fill up the gap between the *ramosus* and *gandavensis* sections. Many of both sections exhibit remarkable combinations of colours, and as they become more and more infused with the *gandavensis* blood, increase the number of flowers opening at the same time, and give

\* A paper read by Mr. J. Burrell, of Cambridge, before the Royal Horticultural Society, September 8, 1896.

a more erect habit of holding their flowers up, instead of looking at the ground, which is the fault of many. I believe we shall have at no distant date remarkable and new colours, including all shades of blue, and giving flowers and spikes equal in size to the fine *gandavensis* varieties, and, like the latter, opening a considerable number of flowers at the same time without loss of constitution. As many of the hybrids of *gandavensis* are as yet unrivalled in vigour, size, and beauty of flower and spikes, I do not fear loss of constitution by an infusion of the good qualities of these into other sections, in order to obtain a greater variety of novel colours.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

JULY 27.

THE meeting on the above date was not so extensive as usual, but there was sufficient to occupy the time of those who take an interest in gardening. The chief feature as it pertains to the massing of plants was that of the *Begonias*, *Lilies* and fine-foliaged plants from Lewisham, which formed a long group through the centre of the hall, being of irregular outline, tapering towards each extremity, and consisting of good strains of the tuberous *Begonia*, bearing finely-developed flowers, these being the special feature. As at several previous meetings, hardy flowers were present in quantity, affording as the season progresses what are the best and most continuous blooming subjects for the hardy garden. Of special interest were the hardy flowering shrubs from Messrs. Veitch, more especially when such things are none too plentiful. Roses came from Waltham Cross and Cheshunt, and were representative of the best garden kinds. *Gladioli* made their appearance for the first time in quantity, and were likewise of good quality, affording a pleasing change. Tuberous *Begonias* all the way from Cork were of extra good quality, the flowers being large and fresh, with a good choice of colour. On this occasion the group of Ferns from Edmonton consisted of *Pterises*, and comprised all the most useful kinds of this fine genus. *Cacti* (curious, interesting, and in some instances beautiful) were shown in fairly good numbers. Orchids were chiefly represented by cut flowers, of which forms of *Cattleya gigas* were the most plentiful. At this season Orchids are never very plentiful. Fruit had as its most prominent feature a grand collection of Gooseberries from Messrs. J. Veitch and Sons, showing great diversity in size and in colour, the fruits being of high-class quality. Other fruits were not at all plentiful.

#### Orchid Committee.

A first-class certificate was awarded to—

*EPI-LELIA RADICO-PURPURATA*.—A remarkable hybrid, the result of crossing *Lælia purpurata* with *Epidendrum radicans*. The sepals and petals are each over an inch in length, taking the intermediate characters of the two parents. The colour is rich orange-yellow, suffused with deep rose, the lip  $1\frac{1}{2}$  inches in length, 1 inch in breadth, the ground colour yellow, suffused around the outer edges with deep purple, which shades to a rich golden yellow in the centre, with a brown stripe in the middle. The column is yellow, shaded with rose towards the base. The growth has the character of *E. radicans*. The flowers are produced on the elongated spike from the centre of the growth. It combines the qualities of both these lovely species. From Messrs. J. Veitch and Sons.

An award of merit was given to—

*CATTELYA WARSCWICZI* VAR. *MRS. E. ASHWORTH*.—A lovely form, with almost white sepals and petals, very slightly suffused with rose. The lip is of the same delicate shade of colour as

the petals, with a slightly deeper shade of pink in the centre. There are the usual white and yellow markings at the base, with the brown linings through the base of the throat. From Mr. E. Ashworth, Harefield Hall, Cheshire.

Messrs. J. Veitch and Sons sent *Cattleya Atalanta* (C. Warszewiczii × C. guttata Leopoldi), a lovely hybrid, the sepals and petals having the brown shade of *Cattleya guttata*, suffused with deep rose-purple. The spoon-shaped lip is wholly deep crimson-purple, the side lobes purple, shading to light rose at the base. *Lælio-Cattleya Clonia* (L.-C. elegans crossed with C. Warszewiczii), the [sepals and petals intermediate] in character between the parents, the petals deep rose-purple, shading to a lighter tint at the base, the front lobe of the lip rich crimson-purple, shading to yellow at the base; a fine form of *Sobralia Veitchii* and *Phalenopsis Hebe* were also shown. Messrs. F. Sander and Co. sent a large plant of *Angraecum Eichlerianum*, *Vanda Hookeriana* with two flowers, *Miltonia vexillaria superba*, *Masdevallia gargantua*, and a form of *Bifrenaria*. Messrs. Hugh Low and Co. sent a small group consisting of finely flowered *Cattleya Warszewiczii*, C. granulosa, a distinct form of C. Gaskelliana named Sunray, the sepals and petals splashed with deep rose through the centre as in C. Trianae Backhousiana; a grand form of *Odontoglossum crispum*, *Bulbophyllum claptense*, and various *Cypripediums*. The most distinct was C. Brilliancy, in the way of C. Youngianum.

Mr. E. Ashworth was awarded a silver Flora medal for a fine lot of cut *Cattleya* flowers, containing eighteen distinct forms of C. Warszewiczii, good forms of C. Mendeli, a good variety of C. Rex, and three flowers of *Lælia elegans Schilleriana*. Mr. G. Sloper sent a malformed *Cypripedium Charlesworthii* and a dark form of *Cattleya gigas*, and Mr. J. H. Kitson, Leeds, sent *Cypripedium leucocilium*. From Mr. J. F. Ebner came *Cypripedium Chapmani*. Major Joicey, Sunningdale Park, sent *Odontoglossum aspidorrhenum* with three spikes of lovely flowers, the sepals and petals yellow, spotted with brown, lip white with large purple spots; a finely grown plant of O. Schlieperianum with three spikes, and a good form of O. S. aureum. Frau Ida Brandt, Zurich, Switzerland, sent *Zygopetalum Lehmanni*, *Epidendrum* in variety, a good form of *Cattleya Rex* and *Odontoglossum Schlieperianum aureum*.

#### Floral Committee.

Awards of merit were given to

*CROTON SHUTTLEWORTHII*, a distinct variety with narrow pendulous leafage incurving somewhat at the extremities. It makes a pretty table plant. The colour of the stems is creamy yellow, the growth remarkably short-jointed, the predominating colours being creamy-yellow and olive-green with a suffusion here and there of vinous red. From Mr. A. Shuttleworth, Eastgate House, Lincoln (gardener, Mr. Bugg).

*VERONICA LA SEDUISANTE*.—One of the most beautiful of this class of plants, the flowering spikes being freely produced and of good length, the colour a rich purplish-violet, the leaf growth carrying a dark bronzy shading. Even where the plants are not hardy they can be strongly recommended for pot culture. From Messrs. Jas. Veitch and Sons, Chelsea.

*HIBISCUS CELESTIS* (*Althæa frutex* or *Hibiscus syriacus*, variety of).—A very decided novelty, and a distinct acquisition to its class by reason of its colour and larger flowers: the colour is a dark lavender-blue with a bronzy-crimson disc at the base. From Messrs. J. Veitch and Sons, Chelsea.

*HIBISCUS PAINTED LADY* (of the same section as the former).—This plant is a fitting companion to the foregoing, the colour being a pale flesh, in some instances almost white, whilst the disc is dark crimson—a very pretty plant. From Messrs. J. Veitch and Sons.

*PELARGONIUM (ZONAL) ANNA BATESON*.—A singularly dwarf and bushy variety with, in addition, quite miniature foliage, the colour of the flowers a deep salmon-pink and semi-double, being supported on stiff, wiry stalks; an excellent plant

either for boxes, pots, or marginal lines in flower beds. From Mr. G. Davidson.

*GLADIOLUS CARLTON*.—A splendid variety, each flower almost 6 inches across, the petals very broad and the form good, the lower segments beautifully feathered and spotted at the base on a creamy yellow ground, the colour of the flowers a clear salmon-rose. This variety shows its affinity to the Nanceianus section. From Messrs. Kelway and Son, Langport.

*GLADIOLUS J. G. CLARKE*.—Another fine seedling, the colour purplish rose with the purple pervading, and feathered on the lower segments with a creamy shade. Messrs. Kelway and Son.

*GLADIOLUS WHITE LADY* (*gandavensis* section).—The best beyond any doubt, with pure white flowers, which in addition are large and of good form, on long spikes. From Messrs. Paul and Son, Old Nurseries, Cheshunt.

*GLADIOLUS GENERAL DUCHESSE*.—Another fine addition to the Nanceianus section, each flower nearly 6 inches across, the colour a decided magenta shaded with purple, the petals very broad and well reflexed, with a large creamy yellow blotch on the lower ones. From Sir Trevor Lawrence, Burford Lodge, Dorking. (Mr. Bain, gardener).

*GODETIA GLORIOSA*.—An extremely dwarf variety, very dense and close in growth, not more than 10 inches in height, the colour a rich and glowing dark purplish crimson, very fine for massing or in lines. From Messrs. Dobbie and Co., Rothsay.

*PHLOX LORD RAYLEIGH*.—Very distinct by reason of its colour, a deep purplish blue, the flowers and spike of full size. Messrs. Paul and Son.

*ROSE (TEA) G. NABONNAND*.—A variety which, although not new (as the term goes), is yet well deserving of the award accorded; the flowers are of beautiful form and of average size. The colour in the bud stage is somewhat similar to, but paler than in *Gloire de Dijon*, and with age a pale creamy blush is the prevailing tint. It is a fine garden Rose. From Messrs. W. Paul and Son, Waltham Cross.

*ROSA RUGOSA ATRO-PURPUREA*.—A deep purplish crimson variety of and a fitting companion to the type. From Messrs. Paul and Son.

*HELIOPSIS PITCHERIANA*.—A deep golden yellow Sunflower of medium size and of good substance, the foliage and leaf-growth being sturdy. Messrs. Paul and Son.

The most striking and effective exhibit was a group of *Begonias* from Mr. H. J. Jones, of the Ryecroft Nurseries, Lewisham. This was arranged down the middle of the hall in undulating form, the general idea original and exceedingly good. The *Begonias* were very finely grown, both flowers and foliage being of splendid quality. Light Palms, Ferns and *Caladiums* of good colour were used as a relief to the gorgeous blooms (gold medal). A large collection of cut *Begonias* came from Messrs. Richard Hartland and Son, the Lough Nurseries, Cork, and were very little the worse for their long journey, most of the blooms being in a perfectly fresh condition. The collection was, on the whole, exceedingly good, the large, full, substantial blooms showing considerable cultural skill (silver Flora medal). Messrs. Paul and Son, Cheshunt, had a group of cut *Roses* and hardy flowers, the former including good examples of *Belle Siebrecht*, *Gustave Regis*, and a new red single, *Royal Scarlet*. Among the hardy flowers were *Acanthus longifolius*, *Polygonum molle*, and some fine flowers of *Rudbeckia purpurea* (silver Banksian medal). A charming group of cut flowers was staged by Messrs. Barr and Sons, Covent Garden, and comprised a fine collection of fragrant herbaceous *Phloxes*, *Delphiniums*, varieties of new *Sweet Peas*, and *Pentstemons*. The group was very tastefully arranged (silver Banksian medal). Mr. T. S. Ware, of Tottenham, also exhibited a very fine collection of hardy flowers, the arrangement of the colours being most pleasing. Several of the smaller varieties of *Sunflowers* were well shown, also *Matricaria grandiflora plena*, *Scabiosa caucasica*, and

some handsome varieties of Liliams (silver Flora medal). A large exhibit of Gladioli came from Messrs. Kelway, of Langport. All the flower-spikes were finely developed, bearing large, handsome blooms, well formed and well coloured. A few of the most striking varieties were Numa, white, shaded with cerise; Charterhouse, rich salmon-pink, a very long and graceful spike; Semolina, deep rose, veined with red, and Don Jose, a rich cardinal. A few very good miscellaneous hardy flowers were also in this collection (silver Flora medal). An interesting exhibit was that of Messrs. W. Paul and Son, Waltham Cross, consisting of new Roses. The most striking varieties were Empress Alexandra of Russia, which was described last week; Sylph, Francis Dubriell, a small Rose, resembling in form the Duke of York, but rich maroon in colour, a very effective variety; Mme. Abel Chateau, a very pretty and shapely pink; Mme. Carnot, a pale primrose-yellow, resembling Gustave Regis in form and growth; and Enchantress, which has already been noticed and described (bronze Banksian medal). A small, but interesting group of plants came from Messrs. Sander, St. Albans, and included *Watsonia iridifolia* O'Brieni, which has been shown at previous meetings; *Dipladenia atropurpurea*, with its rich dark blossoms; *Exacum macranthum*, *Lilium philippinense*, and *L. Henryi*. Messrs. Veitch and Sons, Chelsea, had a few good flowering shrubs, including *Spiraea callosa atrosanguinea*, *Spartium junceum*, *Cornus macrophylla*, single Hibiscus Painted Lady, bearing numerous beautiful flowers; *Vitis heterophylla variegata*, *Veronica la Seduisante*, a lovely rich purple variety; *Hibiscus coccineus*, with large dull blue blossoms; *Pavia macrostachya* and *Eucryphia pinnatifolia*, a very charming flower, very effective in the mass. The same firm also had a box of their beautiful javanico-jasminiflorum hybrid Rhododendrons, the trusses being perhaps rather larger and fuller than usual, and the colours exquisite (silver Banksian). Messrs. J. Cheal and Sons, Crawley, had a few early Dahlias, the Cactus varieties including Startish, Mrs. Kingsley Foster, Chas. Woodbridge, Fusilier, Mrs. A. Beek, and Cycle. The singles were Naomi Tighe, Polly Eccles, Phyllis, Donna Casilda, Demon, and Duchess of Marlborough. The pompons were Annie Holton, Sunny Day-break, Donovan, Bacchus, Lily Wheeler, and Nerissa. A small group of Lilies, including *L. nepalense* and *L. Wallichianum*, was staged by Messrs. Hugh Low and Co., Enfield (silver Banksian medal). Another very interesting exhibit was a group of Pterises from Mr. H. B. May, Upper Edmonton. Some of the most striking varieties were *Pteris ludens*, *P. hastata*, *P. tricolor*, *P. Regine*, *P. tenuifolia*, *P. tremula densa*, *P. involuta*, *P. scaberula*, *P. Duvali*, *P. aspericaulis*, *P. sagittifolia*, and *P. internata* (silver-gilt Flora).

In the Cactus show, Messrs. H. Cannell and Sons had the largest and best collection, including plants of *Echeveria metallica crispa*, *Gasteria angularis*, *Aloe plicatilis*, *Cotyledon pulverulenta*, *Cereus peruvianus monstrosus*, *Echinocactus longiramatus*, bearing three silky yellow blooms; *E. Grusoni* and *Mammillaria stella-aurata* (silver Flora medal). In competition, the first prize for a collection of Cacti went to Mr. W. Bodkin, Highgate, for a very fine exhibit, which also was given a silver Flora medal. The second prize was won by Mr. C. A. Bogg, Brighton Road, Croydon, a silver Banksian medal being also awarded. For twelve Cacti, Mr. W. Bodkin was again first, and Mr. E. R. Clifton a good second.

#### Fruit Committee.

An award of merit was given to—

**NECTARINE PRECOCE DE CRONCELS.**—A finely-flavoured variety above medium size and of a bright red colour, with numerous spots on the shaded side. It is an excellent kind for pots on account of its free-bearing qualities. From Messrs. Veitch, Ltd., Chelsea.

A large space was taken up with over 100 varieties of Gooseberries from Messrs. Veitch and Sons.

The fruits, shown in square trays, represented all the best kinds. This firm on many occasions has shown Gooseberries, but we never remember to have seen so fine a collection. Whinham's Industry, a red fruit noted for its earliness and productiveness, was shown in quantity, also Trumpeter, a heavy-cropping yellow variety. The best flavoured yellow fruits were Golden Drop, Pretty Boy, and Broomyard, the best white being Whitesmith and Champagne; the best green, Pitmaston Greengage, Early Green, and Green Walnut. Among the large-fruited kinds we noted, *white*, Progress, Transparent, Mitre, and Queen of Trumps; *green*, Random, London City, and Telegraph; *red*, Speedwell, Clayton, Monarch, Lord Derby, Registrar, and Bobby; *yellow*, Railway, Mount Pleasant, and Gipsy Queen. A dozen varieties of Currants, with Morello Cherries, and Neetarine Rivers' Early were also shown (silver-gilt Knightian medal). Some very fine Sea Eagle Peaches, sent by Mr. McAuslan, Leeds Castle Gardens, Maidstone, well merited the cultural commendation given. The Japan Wineberry was staged by Mr. Cundey, The Warren House, Cobham, Surrey. Melons came from Mr. Hudson, Gunnersbury House, and Mr. Taylor, Hardwick Grange, Shrewsbury. Messrs. Carter, High Holborn, staged eighteen varieties of Turnips, the most shapely roots being Jersey Lily, Cardinal (a red variety), and Swan's Egg. Messrs. Kelway, Langport, showed Duke of Albany Pea and a good dish of Bunyard's Exhibition Longpod Broad Bean. Mr. Wythes, Syon House, Brentford, sent French Bean Veitch's Early Favourite, to show its cropping qualities in the open ground. The plants were laden with pods. It is very early and stands drought well. Mr. Wythes also sent Improved Mohawk, a new Bean certificated at the trial of forcing Beans at Chiswick early this year. This is a very free-bearing and large-podded variety. A dish of Pea Trowbridge Hero came from Mr. Stokes, Prowbridge; this variety was given three marks at Chiswick last year.

### NOTES OF THE WEEK.

**Fuchsia macrostemma.**—This is one of the most elegant of its tribe, and the flowers are as dainty as the delicate twigs of which the plant is composed. The flowers are very numerous and have quite a pretty effect when seen in a bed on the lawn.

**Helenium pumilum.**—At Kew just now two groups in the hardy plant department amply illustrate the best side of this plant. Fully grown in good ground it is about 15 inches high, and the very pleasing soft yellow blossoms appear in almost endless numbers.

**Astilbe Lemoinei Gerbe d'Argent.**—Among moisture-loving plants this variety, recently exhibited at the Royal Horticultural show, seems likely to prove a most worthy kind. The inflorescence, erect and branching, displays the pure white plumes to advantage.

**Anemone japonica** has already opened its earliest flowers, and gives promise of a rich profusion by the appearance of almost endless buds. An excellent plant in the shrubbery border, where in its own way the plant will spread quickly in good soil, and ultimately provide a fine display of its rosy-red blossoms.

**Nymphæa alba candidissima** is, as may be gathered from the varietal name here given, a distinct white form, very pure in the large handsome, white blossoms that happily are produced very freely in the case of large plants. Where this variety can be secured it should take precedence of the original form.

**Asclepias tuberosa.**—This, one of the most distinct plants in flower in the garden now, is deserving of more extended culture. The heads of orange-scarlet blossoms are very showy, though only reaching about 18 inches high. A sandy and rather moist rich loam often suits it well, and by

the sea the plants grow even more vigorously. In peaty soil and leaves we have also grown it strongly.

**Platycodon Mariesi** is without doubt one of the finest hardy plants now in flower, and one suited alike to the border or the rock garden. The richly coloured blossoms are of large size, and from established plants very handsome. As yet the plant is not common, though in a variety of places batches are springing up.

**Calceolaria alba.**—Some small plants in pots of this singularly pure white kind are flowering in No. 4 house at Kew. Even in this small state they convey an idea of the value of the plant, and where large plants can be obtained they will be found excellent for cutting. The pure white blossoms are very distinct.

**Scabiosa caucasica alba.**—This novelty should be grown largely for the sake of variety. But while being an addition to good hardy plants, this is still wanting in purity. As a break it is valuable, and the plant should now be seeded freely in order to secure a pure white variety. The soft mauve-blue of the type is always admired.

**Inula ensifolia.**—This pretty rock species, which was freely shown among hardy plants on Tuesday last, is in striking contrast to some other forms of this genus. The plant is only a few inches high, bearing small yellow blossoms from a little tuft of narrow linear leaves. It is easily grown in good soil in the border or rock garden.

**Gypsophila paniculata.**—Those who only know this plant by solitary examples have no idea of its beauty when a huge cloud of its blossoms many feet across is seen. In this way the plant, though so easily grown, has an effect of its own, particularly when surrounded by suitable associations. At Kew just now are many fine, almost impenetrable, masses of this plant.

**Coreopsis verticillata.** On Tuesday last at the R.H.S. Messrs. Barr and Sons had bunches of this by no means common plant, the narrow linear leaflets in whorls on the slender stems being very distinct from those of other kinds. Though by no means so useful for cutting as *C. lanceolata*, the plant is worth a place in the rock garden, where its pretty yellow blossoms will be seen to advantage.

**Malva alcea fastigiata.**—A large mass of this at Kew shows the importance of groups even where the plants possess no special value from scarcity or other causes. The bold group of flower-stems 3 feet high, and crowded with blossoms of rose-pink, render it not only showy, but very desirable in all positions where room can be given it, or where space requires quickly filling up in summer.

**Tufted Pansy Queen of the Year.**—This is another of the newer varieties of the miniature type of these flowers, and although but a small blossom, it is one of great beauty. It is described by the raiser as a distinct shade of china blue, the centre being white with a neat yellow eye. The small flowers are almost circular in shape, and produced rather freely on short, erect footstalks on plants of neat and compact growth. The flowers are also sweet scented.

**Dianthus Heddeewigi.**—The improvement in this race of annuals has been very marked during recent years, particularly among the large self-coloured single forms. Some of the intense crimson shades are very handsome, with blossoms 3 inches or 4 inches across. The double forms, on the other hand, are wanting in a variety of ways, and certainly by no means so effective as the singles, these in large groups in the mixed border being very attractive.

**Campanula pyramidalis** (the Chimney Campanula) is one of the showiest of the genus with special value for the greenhouse where bold plants are required. Of its value in this way Mr. Geo. Wythes has at Syon House taken advantage by the free use of the white form, and by providing good culture the tall snowy-white spires of

blossom are both valued and effective. Treated as a biennial, a fine result is secured at its first flowering, and well repays the cost.

**Pereskia Bleo.**—This species is sometimes employed as a stock for grafting the hybrid Epiphyllums on to, though perhaps *P. aculeata* has been more freely used in the past. The above species, which is now flowering in the succulent house at Kew, evidently possesses greater vigour, and, judging by the sample referred to, has the merit of straighter stems, which would prove of value in such cases. The blossoms are very curious in form and of a lilac-rose shade.

**Tufted Pansy Joseph.**—We herewith send a spray of our new bronze Tufted Pansy Joseph. It has a good habit, is very free-flowering, and has a good constitution, being easily struck and kept during winter.—J. GRIEVE AND SONS, *Red-lobes Nurseries, Broughton Road, Edinburgh.*

\* \* A bronze-orange Pansy, distinct and pretty, if it will only keep with us, as all the true Tufted Pansies do. Our experience hitherto with all these bronze-coloured Pansies is that they are difficult to keep.—Ed.

**Mesembryanthemum pomeridianum.**—This lovely plant is employed at Kew as a ground-work on a bed of Lady Penzance Rose, and while in no wise enhanced by this particular association, has merits of its own that should commend it to all lovers of beautiful and easily grown plants. Obviously annual in character, the low-growing, freely-spreading plants flower abundantly, the blossoms, each about 2 inches across, of the most exquisite shade of deep sulphur-yellow. For hot and dry as well as sunny positions such plants possess considerable value, and for summer use would give excellent results.

**Sempervivum Reginae Amaliae** is perhaps one of the most distinct of the Houseleek family, particularly in the manner in which the rosettes cluster together. Usually there are from three to five crowns sideways on the stem, and in this respect unique. The flowers, which are greenish yellow, are well lifted up on a strong stem some 6 inches or so high. The plant has quite a distinct way of reproducing itself, a fresh crown forcing its way beside the old one. Sometimes a solitary crown will arrange itself in a fourfold way when fully grown, even before flowering, which in some species is responsible for this.

**Hollyhocks in London.**—Travellers on the South-Western Railway on nearing London cannot fail to note the freedom with which the single Hollyhock is used in quite small gardens, and the many colours that amid the dirt and gloom of this great city are especially bright and cheerful. It is the single kinds that are thus freely employed, and as they tower far above the boundary walls of many cottage gardens, they are very bright and cheerful. Any plant that will send up its flower-stem 6 feet or 8 feet high in smoky London cannot be ignored. Few plants could be more useful among shrubs in many London squares and gardens than Hollyhocks.

**Delphinium Belladonna.**—One of the finest displays of this unique Larkspur may now be seen in Mr. F. Gifford's Carnation nursery at Tottenham. The plant is unequalled both for its colour and the remarkable freedom of flowering. Here is a group, brilliant beyond compare, about 5 feet wide and 100 feet long, simply a mass of its slender bright blue spikes, the latter the most useful of all for cutting. Above all, the plant blooms perpetually, the present mass being the second crop this year, and still the stools are breaking up freely from below. The plant is more at home here under Mr. Gifford's care in rather light stony soil than we ever before remember.

**Lilium Wallichianum,** shown at the Drill Hall on Tuesday by Messrs. Hugh Low and Co., is a handsome species, producing its huge, slightly drooping, trumpet-shaped blossoms quite freely. The blossoms were each 8 inches or 9 inches long, some plants having three or more each, a somewhat rare occurrence in this lovely Indian form. Externally the blossoms are greenish white,

internally of a clear yellow shade, and nearly white at the slightly reflexing tips of the perianth segments. Though among the handsomest of the Lily family, it is unfortunately not a plant for the open garden in these islands. The most may be made of it, however, by growing it in the greenhouse in sandy peat and in pots of fair size. The pleasing fragrance of this fine Lily is certainly not the least of its attributes.

**Rosa setigera** (the Prairie Rose).—Except for a few belated blossoms, most of the wild types of Rosa are now past. Two or three species, however, are not at their best till late July, and of these this American species is the most effective. In the Rose collection at Kew a large mass is now in full flower. From all the numerous species of Rosa native of North America, this differs in its rambling mode of growth. It produces each year long, arching shoots, 8 feet or 10 feet long, from which the flowering shoots spring the following year. There are never more than five leaflets to each leaf, frequently only three, but they are unusually large, measuring 3 inches long and half as much wide, giving in themselves a distinct character to the species. The flowers—which, of course, are single—are 3 inches or so across and of a very bright shade of rose. They come in dense clusters, nestling amidst the rich green and abundant foliage. One thing, unfortunately, they lack, and that is fragrance; but in spite of that defect the species may be recommended as one of the most attractive of hardy shrubs flowering in late July.

**Genista æthnensis.**—Flowering during July, and even until August, when the bulk of hardy trees and shrubs is past, this Broom ought, one would imagine, to be one of the best known of the species. But in spite of its great beauty and the lateness of its flowering, it is comparatively rare. Of the Brooms that can be cultivated out of doors in this country, it is the tallest and most tree-like in aspect, growing 15 feet high and forming a main stem 6 inches in diameter. Its mode of growth is somewhat sparse, yet elegant, the thin terete branches being pendulous and bearing scarcely any leaves. What few leaves there are occur at long and irregular intervals on the young shoots, and are each about a quarter of an inch long and quite narrow. The flowers, which are very freely borne, are of a bright yellow, and the plants are in beauty for over a month. The species is a native of Sicily and Sardinia, and one of its habitats is the sides of Mount Etna at altitudes of 3000 feet to 6000 feet. It is quite hardy, however, in this country and thrives in almost any soil. Its value as an ornamental shrub may be judged now by numerous specimens that are flowering in the arboretum at Kew.—B.

**Plagianthus Lyalli.**—A large specimen of this New Zealand shrub, some 8 feet high and still more through, is flowering in the collection of malvaceous shrubs at Kew near the flagstaff. In our climate this shrub is considered difficult to flower away from a wall, but that it will do so is proved by this specimen, which has never been trained to a wall, but has been growing near one in a sunny nook. In this country (near London, at any rate) it is deciduous, but this appears to be merely a question of temperature, for in New Zealand it is evergreen at low elevations and deciduous after it reaches altitudes of about 3000 feet. The leaves are heart-shaped, varying in size according to the vigour of the plant on which they grow, but they are, as a rule, 2 inches to 4 inches long. The margins are irregularly toothed, and whilst the upper surface is glabrous, the lower one is sparsely set with stellate hairs. The flowers are produced from the leaf-axils near the ends of the shoots, two or three appearing in each axil. The flower-stalks are slender and about 1½ inches long, and the flower itself is the same in diameter, the five elliptical petals being pure white; they have a slight perfume. Its flowering is mainly dependent on the thorough ripening of the wood, and although it may occasionally bloom in the open, it is when trained against a wall that its full beauty can be seen. A coloured plate

by Mr. H. G. Moon appeared in *THE GARDEN* of July 8, 1893.

#### MISLEADING DESCRIPTIONS.

DISAPPOINTMENTS are of sufficient frequency among the fraternity of those who garden to induce, if taken aright, a certain equanimity of mind under adverse circumstances, invaluable when the losses, which will now and again occur, prove exceptionally trying, but it is difficult for even the stoic to refrain from outspoken criticism when a plant reveals itself, after many months of waiting, as totally unworthy of the glowing description under which it was sent out. This practice of exaggeration is, unfortunately, not unknown among our fellow-countrymen, but foreign firms are, in this respect, by far the greater offenders. Some time since I came across, in the catalogue of an American Company, descriptions of two new fruits, the Golden Mayberry and the Strawberry-Raspberry. Of the former, the following was written:—

The bushes are distinct from all others, growing like trees, 6 feet to 8 feet high, with spreading tops; all along the branches, large, white, well-shaped blossoms are pendent, which are soon followed by the great, sweet, glossy, golden, semi-translucent fruit. The plants when well established will surprise one with their abundance of fruit:

while the description of the Strawberry-Raspberry reads:—

This is indeed a remarkable fruit. It is said to be a hybrid between the Strawberry and Raspberry, and the habit of the plant gives strong evidence that this statement is correct. Its habit is that of neither of the fruits named, but a compromise of the two, it being a spreading, low-growing bush, producing its fruits in branching clusters of three or more at the end of the stems. In form and appearance the fruit is about as good a combination of a Strawberry and Raspberry as one could well imagine, in colour a crimson, equalling in brilliancy the most beautiful Strawberry.

The descriptions are distinct enough, but now that the plants, sent in response to an order, have developed they prove to be absolutely identical.

Another fruit, sent out by a French firm with a flourish of trumpets, was the Spineless Gooseberry. After a year's trial this Gooseberry, which is evidently grafted on the Currant, has in each case proved to be as spiny as the general run of smooth-skinned varieties that do not profess to be spineless, and appears destitute of any particular merit.

To the trade-grower, whose business demands that he should keep abreast of the times and make a trial of all the advertised novelties, such divergences between fact and fancy are doubtless of so frequent occurrence as to create but little annoyance and less surprise, but in the case of the amateur, who is occasionally tempted to order some specially-vaunted introduction, and who finds after a tedious wait that the reality entirely fails to tally with the advertised description, such discrepancy is provocative of considerable vexation.

S. W. F.

#### PUBLIC GARDENS.

**New open space.**—The Parks and Open Spaces Committee of the London County Council have recommended that, subject to the Wandsworth District Board agreeing to pay the Council a sum of £10,000, and to a further sum of £5800 being raised by subscription, the Council should purchase for £31,500 a plot of land abutting on the Putney Bridge Road, and having an extensive river frontage, with a view to its being laid out as a public park and recreation ground.

**Names of plants.**—*H. Kruse.*—*Stanhoepa Wardi* anra.—*Braduell.*—1, Rose Lamarque; 2, Rose Marie Van Houtte.—*C. P. B.*—1, *Centranthus ruber*; 2, *Centaurea macrocephala*; 3, *Lysimachia thysoides*; 4, *Salvia argentea*; 5, *Antemiss tinctoria*; 6, *Antennaria margaritacea*; 7, *Dicentra cucullaria*; 8, *Campanula Rapunculhus.*—*Arthur Tilley.*—Carnation not recognised.

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(Illustrations in Italics.)

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## ORCHARD AND FRUIT GARDEN.

### STRAWBERRY PLANTING.

THE ground being now in splendid condition for planting, owing to the recent heavy, but welcome falls of rain, the formation of new plantations should be proceeded with, as the sooner the plants are got out, so much the sooner will they become established and be the better able to withstand the effects of a severe winter. This early planting also has other advantages, the foremost of which is that if good, strong and well-rooted runners are used, an excellent crop of the finest fruit is secured the first season. When planting is delayed until autumn sets in and nothing but naturally rooted runners are made use of, or such as may be found rooted in the ground between the rows of old plants, a whole season is lost, as such plants cannot and do not give satisfactory returns the first year. When the time and labour involved in preparing the site for a Strawberry bed or plantation are taken into consideration, it is certainly worth while to make use of such plants as will at once give a fair return and so recoup the planter for his outlay. Runners layered into small pots are without doubt the best to secure this end, and when once planted and watered home they give but little trouble afterwards. Therefore if the necessary number of plants has been layered and the ground on which they are to be planted has been prepared, all that remains to be done is to thoroughly consolidate it by treading the surface regularly all over. If the soil is of a light description, another treading in the reverse direction will be needed, for the fact that Strawberries can hardly have too firm a root-hold should not be lost sight of, and as soon as this is done planting may at once be proceeded with. It is a good plan to well water the plants some two or three hours previously, and then if the soil round the balls is watered so soon as plant-

ing is completed, they will not feel the effects of dry weather for some considerable time, especially if a mulch of some non-conducting material such as spent mushroom manure is laid between the rows. Planting is best done with a trowel, and the loose soil can as quickly be returned and placed all round the ball. The soil should be made firm round the balls, and see that the crowns are not placed too low down in the ground. A good guide is to place the balls just low enough in the holes so that they will be covered with a thin layer of soil and no more. When planting is finished it is a good plan to walk through the plot and tread the soil firmly round each plant carefully with the foot. A little extra care taken now in this way prevents the plants from being lifted and thrown out during the winter. The planting completed and the watering done, the surface may be mulched as mentioned above, after which they will not require much attention beyond the removal of runners and the suppression of weeds unless the weather should prove unusually dry, when of course watering now and again will be needed.

The distances at which to plant have not yet been touched upon. As a rule, 2 feet between the rows is the space generally allowed in gardens and 3 feet for field culture, this giving ample room for attending to their requirements. Regarding the distances at which the plants should be disposed in the rows, a space of 18 inches is the usual allowance, but if room is not restricted the more robust and stronger growing varieties may with advantage be given 2 feet.

A. W.

**Alpine Strawberry La Genereuse.**—This variety of a very interesting section that should be far more widely grown has nicely-sized, richly-coloured, and very pleasant fruits borne in great profusion and for a long season. The alpine forms give in flesh something so distinctly diverse in character and flavour from the ordinary garden Strawberry, that they are almost distinct fruits. When two or three batches are grown so that the

younger plants can be disbudded in the spring, the older ones being left to fruit, the disbudded plants fruit abundantly in the autumn, when they are most welcome.—A. D.

**Fruit crops in Monmouthshire.**—This has been a disappointing season. May frosts destroyed a magnificent bloom of both Pears and Apples, as also of Plums and Cherries. Gooseberries and Red Currants generally have poor crops; Black Currants almost a total failure. Peaches, Nectarines, and Apricots are utter failures; Filberts and Figs excellent. Strawberries lasted but a short time; my best both under glass and outdoors was Royal Sovereign. Macelean's Wonder was disappointing, and Noble not worth growing or eating. My best late kind was Latest of All.—G.WENT.

**Peaches on west walls.**—I noted with much interest Mr. Tallack's remarks on Peaches (p. 24). I do not think anyone need fear planting Peach trees on west walls either from a wood-ripening or fruit-producing point of view. At Taunton Park Peaches have not been grown on the south wall for many years. Formerly they did as well as Peaches could do, but in after years the springs being more uncertain, the blossom which expanded early on the south aspect was nearly always destroyed by frosty winds, which at that particular season are very prevalent in that part of Norfolk. On an east wall, however, Peaches do very well, excellent fruit being gathered. I believe the varieties are second early and midseason, as Mr. Tallack advises.—J. C.

**Peach blister.**—As most of your readers too well know, this malady has been very prevalent this spring on outdoor trees. The majority of my trees are on an east wall and suffered rather badly, while those on a south aspect have been quite free. About a month since I was looking over Sir Charles Cave's gardens, Sidbury Manor, about seven miles from where I write, and the trees on the Peach wall facing south looked deplorable; some of the trees appeared almost beyond recovery and the crop very scanty. I have had no experience with Peaches on a west wall. The trees here and at Sidbury were well protected with double fish netting while in bloom, and for some time after, though mine had the advantage of a glass coping, which must have

been advantageous to the trees. Most of my trees are carrying a crop on the eastern aspect, while those on the south are laden with fruit. This makes me favour the latter-named position.—J. MAYNE, *Bieton*.

**Strawberries in nurseries.**—Where probably 100,000 pot plants are needed yearly of some fifty varieties, it is evident that the greatest care must be exercised in keeping the runners true. When looking over Mr. George Banyard's nursery at Maidstone recently, I saw a huge breadth of all the best varieties being layered. The plants are put out early in the autumn in good clean soil, usually following Potatoes. The rows are 5 feet apart, and so arranged that in every case all the runners of any pair of rows come into the centre, so that there is left every alternate space free for walking, working, and, if specially needed, watering. In this way it is impossible for runners of adjoining varieties to become mixed. The small pots are filled with soil, then well watered. So soon as partially dry, the layering proceeds, each pot being sunk to its full depth in the ground and the layer pegged into it. So treated, little watering is needed; indeed, little can be furnished. In three weeks the layers are well rooted and may be removed to the home nursery.—A. D.

#### GRAPE PROSPECTS.

GIVEN a soil similar to that with which I have to deal, *i.e.*, very light and porous, little opportunity of providing anything heavier in quantity, all outside borders, and poor facility for watering, the season of 1897, following the wet autumn and early winter of last year, is one of the best I have had for Grapes. The borders had a thorough soaking last autumn, and a good surface mulching having preceded the rainfall, they have not been in the least dry. I also generally manage to give them an early summer top-dressing in the shape of two parts stiff road sidings and one of cow manure, and this was only on this year a couple of days when we had a tremendous downpour, giving the roots all the benefit of the stimulant. With a soil of the nature described above I find the rejuvenation of the rods is an absolute necessity, and some two seasons back dwelt in a short paragraph on the method adopted, *viz.*, bringing up a young cane from the bottom under the old rod, cutting off from the latter the old spurs for two successive seasons as the young cane was making its way, and finally removing it altogether when its successor was able to furnish the entire stretch of rafter. An old house in which such young rods are in their second season is just now rather interesting, two-thirds of the house from the front plate upwards being cropped from the younger canes, and the remaining third from spurs of the old Vines. A very great difference is perceptible alike in vigour of wood and foliage, in size of bunch and berry. It is, I think, evident that, given a soil on the light side, there is little prospect of producing good fruit from old spurs, but yet the recuperative power of the Vine is so great, that the end is at once gained by the introduction of young wood. I am having a little trouble just now with cracked berries on Foster's Seedling, and that despite the fact that a chink of air is left on at night. The reason is, however, not far to seek. The house is full of plants, and a great amount of moisture was generated alike naturally from these and from afternoon watering. So far as the latter is concerned, the danger is lessened by performing the work in early morning and allowing the chink of air to remain on during day and night. In the event of more rain coming I shall lay some shutters or sheets of galvanised iron on the border, and if more berries go, notch the shoots on one side to the pith midway between the main rod and the bunch. In the late house two varieties, Mrs. Pince and Lady Downe's, that are sometimes not up to the mark, the one in the matter of setting and the other in a susceptibility to scald, are this year extra good. Probably the better results are due to an in-

creased attention respectively to tapping and the use of the rabbit's tail, and to a slight shade accepted early in the season. All the late Grapes except Alicante are the better for a little shade, the vineries lying due south-east, and it is a difficult matter to get the foliage dry before the sun is on it. Alicante is, fortunately, a favourite, and I am gradually running up side rods of this to take the place of other varieties. Two Vines of Alnwick Seedling produce Grapes so wonderfully attractive to the eye alike in symmetry of bunch, size of berry, and perfection of colour, that I am rather loth to take them out, despite the worthlessness of the Grape from a flavour standpoint.

E. BURRELL.

#### GRAPE DUKE OF BUCCLEUCH.

"C." in THE GARDEN of July 17 gives some interesting notes of his experience with the Duke of Buccleuch Grape. Those of your readers who have seen it in perfect condition will agree with "C." that it is "a grand Grape." At the same time, it must be admitted that it has certain peculiarities of constitution that require special treatment. I have grown it here for twenty-seven years on its own roots, and had fine crops every year. There is no trace of spotting. The Golden Champion I admit used to spot with me a little, but never the Duke. The treatment I give the Duke is as follows: I maintain a succession of young rods, cutting out all old canes as soon as possible. When I say old canes I mean rods, say four years old. In the case of the Duke I look on that age as old, as there can be no doubt it does not fruit well on canes of that age or over. By running up young rods, by long spur pruning (say four eyes left), and by paying attention to the careful artificial impregnation of The Duke, I have never failed during twenty-seven years to obtain a fine crop of this noble Grape. In regard to flavour, I think the Duke is first-rate. Though not so sweet as the Muscat, it has a peculiar lusciousness of its own, which, I consider, makes it a Grape not to be beaten by any other kind for placing on the dinner-table or handing to the invalid. Taken all in all, I think that the Duke is well worth all the extra trouble that may have to be bestowed on it, and I am sure that those who have once seen and tasted it in proper condition will say that it is a noble Grape. Some may think that I am prejudiced in its favour because my late father was its raiser, but I can assure them that I judge the Duke on its own merits, and I have tested and proved it for many years.

JOHN THOMSON.

*Chorinford.*

#### NOTES ON GOOSEBERRIES.

THE Gooseberry crop is an important one in all gardens. It is astonishing the length of time the Gooseberry crop lasts. This year the fruits were large enough to gather for tarts, &c., in May, and I have been gathering regularly since that time and shall be able to continue well into August, and where they are grown on north walls and late kinds chosen, they may be had well into September. I am doubtful if there is another crop that can be made to pay as well. During the last ten or fifteen years I have been paying much attention to this crop, both as to their producing powers and also from a flavour point of view. I dress the ground every year, as the very heavy crops that we get need this to keep the bushes vigorous.

Regarding pruning, I find a moderate course the best. The shoots should be kept thin enough to get your hand between them. I do not like to see the shoots cross each other. I commence to gather the fruit as soon as large enough, and get off the largest berries first. I go over all the bushes, choosing those with the heaviest crop first, and continue this all through the season till ripening begins. This helps to relieve the bushes and causes them to crop heavily every year. It helps in another way—namely, gives them an opportunity to produce berries of the highest

flavour for dessert. I think that when a tree or bush has a too heavy crop the flavour is very poor. Some kinds are not worth growing for dessert, as they have no flavour, although they may be kinds that swell into a usable size early. Industry all will admit is a good kind, more especially for early work, but for flavour I consider it second-rate. A recent writer spoke highly of Whitesmith, and I quite agree with all he says. The late Mr. Wildsmith considered this one of the best for flavour. I have it now (end of July) in fine condition. Another kind I can strongly recommend is Hedgehog, a green hairy kind, not a large berry, but of the very best flavour. It is a good companion for Warrington, which is a splendid late kind. Ironmonger is a fine-flavoured kind. Early Yellow is fine when grown on strong bushes and well thinned in a green state.

J. CROOK.

#### PEACHES AT ORCHARDLEIGH.

I RECENTLY visited the gardens at Orchardleigh Park, Frome, the residence of the Rev. W. Duckworth, in which are many features of interest. What to me appeared a very prominent one was the heavy crop of ripe Peaches in the earlier of the two houses devoted to them. The structure, which would appear to have a long history, would seem to be well adapted to the trees under notice, judging from the very heavy crops borne annually by them and the high quality of the fruit. The two houses are about equal in length, one having a south-eastern aspect, the other facing south-west. The early house is some 90 feet in length by about 9 feet or 10 feet wide, and the crop borne by the half dozen trees therein was remarkable. Over 2000 fruits fit for dessert will have been gathered ere this beyond the many dozens of smaller ones used for preserves, of which no record is kept. But for the fact that medium-sized Peaches are the most appreciated, there is abundant evidence that very fine fruit might be produced with less strain on the trees, although these show no loss of vitality from the abundant crop they have carried. Two large trees of Royal George, one of Bellegarde, and some unnamed sorts were the varieties planted, the first-named being the most remarkable. The houses being narrow and lofty, they are furnished with front trees only. Mr. Clarke, the gardener in charge, evidently takes great pride in his trees, pruning away all old and useless bearing wood as soon as the crop is cleared, and in the winter the roots have the same careful attention in the removal of much exhausted soil, and new turfy mixture. This is not merely placed on the surface, but incorporated with the old soil to the depth of the border, and both the trees and crop speak volumes for the soundness of the treatment they have had. Mr. Clarke is favoured in having an abundant water supply, and the total absence of red spider shows that he does not stint water either at root or branch.

W. S.

*Wills.*

**Strawberry Latest of All.**—I was surprised to read of "R. D.'s" failure with the above Strawberry. With me it has cropped remarkably well this season. I consider it one of the finest flavoured and largest midseason varieties yet introduced. The soil here is very light and naturally poor, resting on sand, not an ideal one for Strawberry culture. I also find it withstands the drought well. Vicomtesse H. de Thury and Sir J. Paxton also do well here. I have discarded both Noble and Laxton's Competitor as being deficient in flavour, the latter, though an enormous cropper, being one of the worst flavoured Strawberries I ever tasted. The fruit is large, but very soft, and hollow in the centre.—G. W. HAXON, *Fowley Park, Liphook, Havts.*

—At p. 64 "R. D." complains of the behaviour in his own garden of this new Strawberry, and asks if others have found it unsatisfactory. I obtained plants last autumn which were small and badly rooted, yet in spite of this drawback they made good headway, and by

November had grown into ordinary-sized plants. This summer they have fruited well, and for the most part the fruit has been fairly well shaped, although I do not consider it one of the handsomest Strawberries. I have not seen any trace of the fungus "R. D." complains of, and I consider the flavour good for a late variety, although the slight muskiness perceptible might not be cared for by some. I think it would be a good variety for planting on a north border. It grows freely and produces abundance of fruit. My soil is light.—J. C.

**Potting Pine suckers.**—Where the old stools of Queen Pines have been well nourished, the suckers should by the beginning of August be stout and vigorous. They should be twisted off, not drawn out from the parent plant, using a leather glove for the purpose, carefully trimmed with a sharp knife and inserted, the largest into 8-inch and the smallest into 6-inch pots, using a compost of good sound fibrous loam, to which may be added a little bone-meal and charcoal. Animal manure is best avoided at this stage. The potting stick must be freely used, a firm condition of the soil being necessary, as if this is in a proper state—neither too wet nor too dry—water will not be needed until more roots are forming. If, however, potting is loosely performed the soil soon dries, rendering water necessary, which may result in partial or complete rotting of the base of the sucker. Potting completed, they should be transferred to the plunging bed. I prefer a sunk pit for suckers, as here the atmosphere can be kept more moist than in ordinary fruiting houses. The roof should be furnished with a roller blind, as the suckers need shade in sunny weather. Good Oak or Beech leaves are preferable to tan. Atmospheric moisture must be supplied by frequent dampings and by keeping the evaporating pans constantly filled. The foliage each sunny afternoon should be lightly syringed. Air must be admitted cautiously until new roots are formed, but a chink must be given on fine days to sweeten the house and lessen the liability to drip. As soon as the plants become established shading may be dispensed with and each plant well moistened. A bottom heat of 90° is a good one for suckers.—J. C.

THE LOGANBERRY.

I HAVE read with interest the remarks on the Loganberry in recent numbers of THE GARDEN, also the paragraph on misleading descriptions on p. 92 of the recent number.

On p. 50 in your number for July 17 I observe that the Loganberry was given an award of merit by the fruit committee of the Royal Horticultural Society, and the name of "Strawberry Raspberry" is given as a synonym, but this must be a mistake, though it does not appear to have been noticed. I received some months ago a plant of each of three new fruits advertised. These were the (1) Loganberry, described as a true hybrid between the Raspberry and the Blackberry; (2) the Golden Mayberry, said to be a true early yellow Raspberry with a tree habit; and (3), the Strawberry Raspberry, said to be a hybrid between the Strawberry and the Raspberry, of Japanese origin.

I observe that "S. W. F." in his remarks on misleading descriptions, speaks of his plants supplied under the names Golden Mayberry and Strawberry Raspberry, proving to be identical when developed. I conclude that he must have had plants of one kind sent for the two. There is no resemblance between the two plants received by me under the names mentioned. The Strawberry Raspberry seems to have a very intermediate appearance. The leaves remind me of those of some Spiræas, but the stalks are prickly. My plant started well, but has not fruited, and appears to be making little progress. The Golden Mayberry is a more healthy plant, but shows no sign of fruit as yet. Its leaves in shape are more like those of Gooseberries than those of Raspberries, but longer, less spiny, and more pointed. It is evidently more of a bush than the ordinary

Raspberry, but at present it is too small to form a very decided opinion upon. The descriptions referred to by "S. W. F." may prove exaggerated, but hardly so much so, I think, as he has inferred.

As to the Loganberry (or Blackberry Raspberry), I have a nice healthy plant. It has produced one good fruit with a wine-like flavour, and another is being developed at the tip of a leading shoot. I observe in Hooker's "Student's Flora of the British Islands" (1870), p. 110, under the heading sub-sp. *Cæsius* (Dewberry), the remark "R. pseudo-idaus, Lejeune, is probably a hybrid with R. *Idæus*." It would, therefore, appear that hybrids between the Dewberry, a form of the European Blackberry of marked character, and the Raspberry occur even in a wild state. It is not, therefore, so very surprising that the Raspberry should have been successfully, though it appears inadvertently, crossed with an American form of Blackberry. No doubt it is only the commencement of further improvements.

Chamonix, Teignmouth. EUSTACE F. CLARK.

APPLES AND PEARS FOR EXPOSED SITUATIONS.

WOULD BE planters of Apples and Pears are often debarred from carrying out their wish on account of the high and exposed position of their garden, and the fact that the soil is heavy and retentive, being under the impression that nothing but cider varieties of Apples and stewing sorts of Pears will do any good under such conditions. When, however, one meets with instances where even so-called delicate dessert Apples and capricious Pears are growing freely and bearing profusely under just such conditions, one is apt to come to the conclusion that after all it is to a great extent a matter of getting the young trees acclimatised, more, in fact, than any particular selection of sorts. An account of the collection of Apples and Pears growing at Hillside, Newark, may prove instructive generally. Hillside stands very high, and although a good deal of fresh opening material was added to the staple when the place was made, the natural soil is strong in the extreme and the subsoil by no means warm. Apples are grown in bush, pyramid and espalier form, and Pears on espaliers and walls. On espaliers the Apple that surprised me most was the old Ribston in fertile condition, and free from its common enemy even in light warm soils—canker. Cox's Orange does equally as well, and having tasted the fruit I can answer for the quality. Another so-called capricious French dessert Apple, and one which I failed after much trouble to grow in a light warm soil on a west wall, is Calville Blanche. The espalier tree at Hillside grows freely enough and crops almost annually, the fruit ripening up most satisfactorily. Lord Burleigh, an excellent medium-sized dessert variety, in season from November to March, is constant and good. King of the Pippins, capricious in many gardens in the sunny south, produces at Hillside some of the finest fruit I have ever seen. Bramley's Seedling, Bedfordshire Foundling, and Mère de Ménage do grandly as orchard trees. I also noticed a young tree of Newtown Wonder, which is sure to become a popular Apple, doing well, also one of Bismarck; both of these were grown as espaliers.

Pears are represented by Doyenné du Comice, Marie Louise d'Uccle, Pitmaston Duchess, Brockworth Park, and Princess on an east wall, the growth being robust and the fruit large and good. Those on espaliers are Belle d'Abries, a late spring Pear of large size, and in good seasons average flavour; Doyenné d'Alençon, a December to January variety of delicious flavour. This Pear is generally supposed to require the highest culture, but at Hillside, under the conditions described, it is excellent. That generally reliable late Pear, now grown by almost everyone, Olivier des Serres, is quite at home in the strong soil of the Hillside garden, the flavour being exquisite during February and March. That seldom-seen Pear *Passé Colmar* is also well represented, the Quince stock suiting it best. Josephine de

Malines in this strong soil produces extra large fruits and plenty of them. As cordons, Doyenné Boisselot, Beurré de St. Denis, two varieties procured from the neighbourhood of Paris, are fruiting nicely, and what surprised me as much as anything was to find the delicious, but often unsatisfactory, Thomson's doing well in every way. J. C.

APPLE CROP IN 1897.

IN this district it cannot be said that there is anything like a full crop, though in some places there is a fair amount of the early soft varieties. This no doubt is owing to the unfavourable weather in spring during the time the trees were in bloom. In some orchards there are heavy crops of Keswick Codlin, The Queen, Ecklinville, Worcester Pearmain, and Pott's Seedling, but as none of these are keeping varieties there may be a glut of them in the market, while later on good fruit will be scarce. With me Ribston Pippin, Claygate Pearmain, and some other choice kinds are carrying a fair crop, but many of the best kinds fail to give any fruit. There is but little difference in this respect between old and young trees, though the latter are producing by far the finest fruit. Warner's King, King of Pippins, Alexander, Stirling Castle, Irish Peach, Yorkshire Greening, and Northern Greening have all full crops with me, but in some orchards they are by no means plentiful. Lane's Prince Albert has never failed to give a good supply of fruit, and this season is no exception, as many of the trees are fully laden with fruit. It is often said that late-flowering varieties are more likely to produce a full crop than the earlier ones; this is not so this season, for Irish Peach, which is one of the first to bloom, has a fine crop of fruit, while Court Pendu Plat, about the latest of all, has scarcely an Apple on it. There is much to be said in favour of shelter for fruit plantations. Here a tree of Blenheim Orange that is sheltered from the north and north east by some large Fir trees is carrying a full crop of fruit, though others that are more exposed in the same orchard have scarcely an Apple on them. That our orchards in many instances are too exposed there can be no doubt, and those who are desirous of obtaining the finest results would do well to take this into consideration when planting is contemplated. The protection ought, however, not to be too close, as the roots from such trees would be a serious hindrance to the growth of those it was intended to encourage. Caterpillars have been less troublesome this season than for some years past, so that most of the trees have made a free, healthy growth. Canker in some instances is a serious drawback, for just as the trees are of a useful size the branches die off wholesale. This is particularly so with Stirling Castle, Ribston Pippin and Hawthornden. Bramley's Seedling is of no use at all with me. The tree is of rampant growth and scarcely ever has any fruit. This season there are not a dozen Apples on a whole row; the same may be said of Annie Elizabeth and Flower of Kent. The most useful varieties I have are Ecklinville, Stirling Castle, Lane's Prince Albert and Wellington, as it is seldom that any of them fail to crop freely. Keswick Codlin is usually a free cropper, but the fruit is too small. It is, however, not well to depend on too few varieties, particularly where a constant supply has to be kept up, and those who have room would do well to make a selection of at least two dozen of the best. H. C. P.

Buxted Park, Sussex.

**Scarcity of Plums and Apricots.**—So far as midland orchards and market gardens are concerned, so great a scarcity of Plums and Apricots has not been known for years. In the majority of gardens the Apricot trees are absolutely bare of fruit, and the same may be said of Plums. Even the hardy, free-bearing Victoria has failed to yield. The cold winds which prevailed for several weeks just as the Apricots were in bloom were no doubt the cause of the fruit failing to set

even where fish netting was used. Those who wish for Apricot jam will be forced to rely on foreign fruit, as neither the fruiterers' windows nor the open markets of the midlands will this year be able to supply home-grown fruit. No fruit is missed by lovers of high-class preserves than the Apricot.—C. C. D.

**Peach notes.**—I beg to thank "A. W." and "G. W. S." for their kind answers (p. 382) to my query about the selection of Peaches. "A. W." desires to know what difference there is between Royal George and Madeleine Rouge de Courson. I have waited till the fruits of these two varieties ripened. On trees bearing their first good crop I confess I cannot see any difference. The fruits on both are rather large and highly coloured. They have small flowers. During their blooming it seemed to me that the blooms of Madeleine Rouge de Courson were somewhat larger and of a different shade of colour, but it may be that I was mistaken. In the growth and leaves I cannot detect any difference whatever. I must add that in the first house, where the Royal George in question has as companions Amsden and Hale's Early, the first ripe fruits of Amsden were gathered on May 30, Hale's Early about two weeks later, and Royal George will ripen in a few days, that is, about July 25. In the second house, where Madeleine Rouge de Courson is grown with Montague Double and Grosse Mignonne Hative, and which has been started three weeks after the first house, Montague Double has given the first ripe fruits a few days ago, viz., July 17, also earlier than Royal George in the first house, and Madeleine Rouge de Courson will be ripe a few days later than Royal George. "A. W." advises me to take Dr. Hogg or Dymond; "G. W. S.," Noblesse, Dymond, Crimson Galande, and Barrington. Perhaps it would be more advisable, instead of planting three trees of one variety, to take three varieties. And if so, which of them? For instance, Dr. Hogg, Dymond, and Barrington; two trees of one kind and one tree of another. Are there other Peaches with larger fruits than the three named?—R. K., *St. Petersburg.*

## FLOWER GARDEN.

### HYBRID NYMPHÆAS AT KEW.

MANY of the lovely hybrid Water Lilies that M. Latour-Marliac has given to our gardens are now to be seen in excellent condition at Kew. All the varieties named below are to be found in the brick and cement tank at the extreme end of the herbaceous ground, which, to say the least, is utterly unworthy the beautiful set of plants it now contains. It may, however, be urged, and that with a good deal of reason, that in a tank of this kind visitors can better see the beauty and value of the plants individually than could be secured were they growing in an open pond or lake. The importance of the plants themselves would, however, appear sufficiently strong proof that a special tank or pond should be a necessity, so that the handsome specimens that now represent some of the best kinds may have still wider scope for development, and year by year see them attain to greater size and beauty. It is obvious that many of the larger and bolder forms are getting too large for the quarters to which they were consigned a year or two back, and that unrestricted play for root and branch alike would contribute materially to their future welfare. So far, however, the present quarters have been useful, inasmuch as they tend to illustrate that such things may be grown to a considerable size even without lake or pond, a piece of instruction that is doubtless wanting in many directions, and apart from this the plants are always at hand for examination. One cannot but view with satisfaction the general vigour and health-

fulness of these newer kinds, a condition of things certainly not contributed to by the excellence of the water in the tank in question, which is open to much improvement. That the dense carpet of vegetation clothing the sides of the tank has nothing to do with the army of aquatics therein is abundantly proved by other open tanks that contain none at all, and while it does not beautify in the least, it is satisfactory to know that it does no harm to these beautiful hybrid Nymphæas themselves. As my visit was rather late in the day I did not make a complete list, though the following may be accepted as the most conspicuous at the moment, and in the course of a few days, with a much larger number of blossoms expanded, these lovely flowers should be worth a long journey to see.

**NYMPHÆA MARLIACEA IGNEA** is very fine, with petals of a deep rosy crimson hue, and green sepals margined with rose and white. The foliage, too, is very beautiful, the young leaves of a deep bronzy hue and the older leaves blotched with crimson.

**N. M. CARNEA**, with a dozen or more of its buds in various stages, promises a long and welcome display of its flowers; indeed, it is the great profusion of flowers, at the moment indicated by a host of appearing buds, that gives these lovely Water Lilies a value of their own till far into the early autumn months. The lovely flesh tint of this kind is very beautiful.

**N. M. ALBIDA** is the giant of the white-flowered kinds, the handsome flowers reaching from 8 inches to 12 inches across; the growth also vigorous, as also very dense on the water's surface.

**N. M. FLAMMÆA** has many buds, but no expanded blossoms at the moment. The flowers are pink at first, and afterwards deepen to red in the centre. This kind is also vigorous and rather spreading in habit.

There are also several forms that belong to the *N. Laydekeri* group to be seen here, notably

**N. LAYDEKERI FULVA**, with several large buds that will open in a day or two; the blossoms are red on a creamy yellow ground, and have large mottled leaves.

**N. L. LILACEA**, while not large in size, is very charming and flowers abundantly, something like eighteen flower buds being noted. In growth this is very compact, while the purple-bronze of the young leaves makes it even more attractive.

**N. L. LUCIDA** has very large flowers of rose, vermilion and white, with a spreading habit of growth. In this, again, the young leaves are of a dark bronze, while the more mature leaves are green, with irregular, longitudinal blotches of dark chestnut near the margin.

Apart from those named I noted the dwarf-growing *N. pygmaea helvola*, a dainty kind in every way and especially suited to small aquaria, and *N. odorata sulphurea grandiflora*, with long-stemmed blossoms of large size, together with the older forms, such as the curious *Nuphar advena* and the common white Water Lily, *N. alba*, and its variety *candidissima*; this last still a fine and useful kind, with large pure white blossoms that are very striking. All these promise a display of blossoms for some weeks to come. These newer hybrids are invaluable, and anyone interested cannot do better than visit the Kew collection now in flower to see for himself what has been accomplished here under quite ordinary conditions of culture.

E. J.

**Eccremocarpus scaber.**—It is curious how many flower lovers fail to recognise this old inmate of our gardens, and which not so many years ago was extremely popular with window gardeners. The half-hardy climbers were once in great demand, and I should like to see them again come to the front. Planted against a wall or

fence, or staked in the way of Sweet Peas, they produce an effect which can only be obtained by things of similar growth.—J. C. B.

**Linum sibiricum.**—This slender-growing, hardy annual, bearing a profusion of light blue flowers, and its white variety I recently noted in fine bloom. One is a counterpart of the other, except in the difference in the colour of the blossoms, both growing to a height of 2½ feet. Seeds are readily obtainable, and they may be sown now, or at any time which is convenient. Preference is given to sowing in April and May, as then strong plants can be secured for flowering the following season. The blue form is preferable to *L. perenne*, which it resembles, but is deeper in colour.—R. R.

**The Tulip Poppy.**—This, known as *Papaver glaucum*, is a very striking annual Poppy growing to a height of from 15 inches to 18 inches, to all appearance much more successional in blooming than most of the annual varieties, the colour rich, bright reddish-crimson, the inner petals taking the form of a Tulip, hence its name. A small bed of this, or plants dotted about among other annuals are very effective. It is perhaps best to sow the seeds in the open and allow the plants to stand and bloom, but some thinning out is required if a good head of bloom is desired. Both this and the fine types of *P. Rhæas* do not transplant well, and though some succeed many fail, and that is why sowing where the plants are to stand is so much recommended. The better the soil and the more room given to individuals assist to produce not only fine, but successional flowers.—R. D.

**Carnation Salisbury.**—Those who value Carnations for their usefulness as hardy border flowers will find this very serviceable. It is very hardy, of free, vigorous habit, flowers profusely, and has stiff, erect flower-stems that do not really need support. The blooms are of medium size, but of good form and pure. It is perhaps the best white Carnation that can be grown for supplying a quantity of cut bloom. We want more Carnations of this description, and some experienced raiser should devote himself to raising varieties that bear their flowers on stout stems that require no support. Varieties like *Red-braes*, for instance, have stems so weak that the plants have to be gone over several times to maintain the flowers in an erect position. This renders Carnation culture rather expensive.—J. C. B.

**Lilies.**—I imported Lilies of various sorts from Japan last autumn. They were all planted in the same soil, a mixture of loam, peat, and silver sand, and are all doing well except *L. Batemanæ*, which looks very unhealthy. The leaves are turning yellow and some of the bulbs are actually dead. Can anyone suggest what I ought to do to save the remainder?—HIBERNIA.

\* \* It is not mentioned whether the plants of *Lilium Batemanæ* referred to are in pots or in the open ground. If in pots, it may be pointed out that this Lily, as a rule, resents such treatment; hence it cannot be recommended for pot culture, but in the open ground imported bulbs generally do well and flower in a satisfactory manner. The conditions most favourable to it are an open soil, such as a mixture of loam, peat, and sand, a well-drained spot, but at the same time one that is not parched up during the summer, and a partially shaded position, as it dislikes exposure to the full rays of the sun throughout the entire day. Little can be done now to save the remainder, the only thing being to leave them untouched till the stems decay, when they should be turned out of pots or dug up, according to the way in which they are situated, and every bulb thoroughly examined. Those that are decayed had then better be thrown away, while the sound bulbs can be stored in sand kept slightly moist till planting time. The advice to leave them untouched till the stems decay does not mean that if in pots they should be kept without water, as undue dryness will quickly injure any Lily bulbs.—H. P.

## ENGLISH GARDENS ABROAD.

SOME of the most delightful things in flower gardening are to be seen in the gardens of English people living in Madeira, the Riviera, Algeria, and countries generally permitting of beautiful flower gardening during the winter and with a season of many flowers throughout the spring. These are real gardens varied and full of beautiful colour, yet without any trace of the barren monotony characteristic of most gardens at home. The generally picturesque nature of the ground, the presence of graceful fruit and other trees, and the absence of any pretentious attempt to conform the whole to one set

mate makes the garden beautiful, as the way of planting is the main source of beauty here.

Borders are thick set with the good foliage of the Iris in many forms, and particularly the winter-flowering Iris, which has its home in Algeria, and its white variety found by Mr. Arkwright, both very charming plants. The Pelargoniums are in lovely bushes in light or shade. How well they look as hedges or groups, while Datura, Palm, Jasmine, Acacia, Fig, Lemon, Magnolia are happy in the sun, with masses of Cineraria here and there in half-shade, with many Violets, and even wild flowers of the country. Bougainvilleas and handsome Bignonias grace the

Some of the most beautiful garden effects we have ever seen were here, all the finer from the background of high cliffs above clad with evergreen Oak, Pine, and wild Olive, but the best lesson is not from the varied life in the garden so much as from the happy and natural way the whole is disposed.

In this way we have variety as well as pictures—as much variety as may be wished, of which there is an example in

## MR. HANBURY'S GARDEN AT LA MORTOLA.

This fine garden, the contents of which are so very interesting from a garden as well as a botanical point of view, we hope to be



*The Palazzo Orengo at La Mortola, Italy. From a photograph sent by Mr. Hanbury.*

idea lead to the simple and artistic garden. The garden of Mr. Arkwright at Mustapha, near Algiers, is a good example of the English garden in other lands, a garden full of beautiful things, and withal so placed that pictures are seen at every turn. Noble Tea Roses like Chromatella are fountains of bloom, sometimes running up a tapering Cypress, and sending out of it far overhead graceful shoots laden with noble flowers. Lamarque, the noblest of white Roses, grows and blooms about as freely as the Elder tree does at home. Many Tea Roses of all sizes are here, sometimes kinds are superb that rarely open well with us at home, such as Cloth of Gold and Jean Ducher. But it is not only the cli-

walls in free and pretty ways, while here and there the Algerian Ivy is seen, a noble climber, the fine qualities of which are not in the least affected by the hot sun in the summer here. We have never seen such rich banks of this Ivy as about Algiers; it ascends to high parts of the mountains there, which look arid enough and are terribly hot in summer. No one need despair of gracing a dry bank with a fine thing who takes the Algerian Ivy for that purpose. It may be its long sojourn in so dry a country has prepared it better for its work in the sun than the forms of the Ivy from the cooler north. There are several varieties of Ivy wild in Algeria besides the one we know as the Algerian Ivy.

able to discuss in more detail at a future day, and merely now give a short account of its creation. The variety is not in itself so much worth seeking as beauty, which is just what we lose when we commit ourselves to any one way of flower gardening. To be free to add or plant at almost any time of the year is a great advantage; whereas in the common flower garden the whole is set out and taken up at fixed times. The result is a dreadfully fixed one too, and if any beautiful bush, or bulb, or flower happens to come in our way that does not fit into the wretched system, so much the worse for it.

The fear of anything like a bush or low tree that governs the idea of many flower gardens at home at present does not exist

here, so that we have light and shade, many bushes and even low trees that give chances for surprises and changes. This is partly owing to the warmth which allows of the growth of many pretty bushes that may well grace a flower garden, but once free from the idea that a flower garden must be a flat surface seen at a glance, there would be no real difficulty in carrying out like ways of planting in our climate in which so many lovely bushes grow if we give them a chance. One minor charm of these English gardens abroad arises from the fact that any necessary stone-work is done in a simple way by the garden men. As the ground is often steep, steps and little walls or protecting corners are often wanted, but whenever the native gardener wants anything of this kind he does not go through a circumlocution bureau for inspiration and drawings to scale, but builds what he wants in a simple ready way with the stone nearest at hand, and the result is much better gardening than more elaborate and costly work.

La Mortola is the name of a very ancient Italian village about three miles east of the gorge of the Pont St. Louis, which forms the boundary between France and Italy. Cap Martin on the west and Cap Mortola on the east make the semi-circle known as the bay of Mentone, a lovely and perhaps the best sheltered spot on the Riviera, where the mildness of the climate is attested by the fact that the Lemon flourishes perfectly, and is the ordinary crop grown by the peasants, and where many species of Palms and Bananas withstand the winter without any protection.

The Palazzo Orenco, so named after the Orenco family, who owned the house for two centuries after 1620, when it passed to them from the noble family Lanteri, of Ventimiglia, was purchased in the year 1867 by Mr. Thomas Hanbury, an English merchant at Shanghai, who traces his descent from the Hanburys, formerly resident at the villages of Hanbury and Feckenham, in Worcestershire, and afterwards at Pont-y-Moil, in S. Wales.

Mr. Hanbury, finding no garden at the Palazzo Orenco in 1867, immediately proceeded to transform the steep hillside between the seashore and the Corniche road above by planting an immense variety of exotic trees and shrubs which he judged suitable for the climate. In this he was aided by his brother Daniel, the well-known pharmacologist, who, however, died in 1875.

La Mortola soon became well known to the public as the largest and most beautiful garden on the Riviera, and to scientific botanists as a garden of acclimatisation, where certain plants might be found flourishing in the open air which elsewhere in Europe required culture under glass. Although the climate is excessively dry in summer, it is found to be well suited to the flora of Australia, Mexico, the Cape, and the Canaries, and the collection numbers at present about 4000 species, all living in the open air.

The garden and grounds, which are about 100 acres in extent and occupy the entire cape, are thrown open to the public twice in the week. They are traversed at right angles by the ancient Via Aurelia, the only road along the coast in the time of the Romans and down to the early part of this century. A visitor in the month of January will find 400 to 500 species of plants in blossom, but the garden is seen to the greatest advantage in March and April. Invalids should be warned that the descent from the entrance gates to the sea is about 350 feet, and that no carriage can enter the grounds.

W. R.

**Phloxes.**—Where facilities exist for a good surface mulching and copious supplies of water,

given a light, dry soil and a hot summer, or on a soil naturally well adapted for their cultivation, I would advise the annual treatment of Phloxes, as spike and individual pips are certainly finer on young plants, but if after putting out the young plants they have to shift for themselves in a rather poor, light soil, I should say the best results are obtainable from established stuff. Naturally it is not advisable to let them occupy the same quarters for many years, and immediately there are signs of deteriorating, the old clumps must be removed and their number made up from young stuff, of which a supply should be always on hand. The above remarks in connection with the younger plants and their inability to stand the combination of a hot, dry summer and a light, dry soil were borne out this year by a small collection of newer varieties planted rather late, and which I have had to mulch and water to keep on the move. Good treatment is also conducive to a greatly prolonged flowering season. Touching this latter matter, it may be well to remind growers who are trying Phloxes for the first time that the pips are set on the spike very thickly. A great number of unexpanded flowers are waiting their turn, and as the pips go off they should be nipped out with the finger and thumb to allow of the development of those in the background—an apparently trivial matter, but, like good treatment, tending to greatly prolong the season. It will be found advisable to stake some of the newer varieties in their first season if the weather is rough and the situation very exposed. I do not like to do this more than is necessary, but it is preferable to finding some of one's finest spikes prostrate and probably snapped off close to the ground. No garden of any size should be without two or three beds of Phloxes, and a mixture of the early and late-flowering sections is advisable not only to prolong the season, but also that the difference in the heights may prevent a formality inseparable with a collection all of nearly the same size. A variety just now (July 20) at its best is Snowdon, a splendid truss with pure white flowers, the pip large and perfect in form.—E. B. C.

#### RAYLESS TUFTED PANSIES.

MY remarks on Tufted Pansy Waterloo in THE GARDEN of June 12 were founded upon a trial of a young batch of plants alongside a smaller number of two-year-old plants. The former were propagated late last autumn, and so far have been very disappointing. Comparatively little growth has been made, and the quantity of bloom has been very meagre. On the other hand, the two-year-old plants have done fairly well, each plant giving a nice lot of blossom and of a shade of blue that is now very welcome. Although these two-year-old plants have much more vigour than those flowering for the first time this season, there is something still lacking in the constitution of the plant, and which, I fear, we shall never get. Regarding several other varieties raised by Dr. Stuart, they are in almost every instance typical of what a Tufted Pansy should be. This is especially noticeable in plants grown on a second and third year, the plants being literally covered with charming medium-sized blossoms, and for general garden decoration invaluable. I quite agree with all that is said of Blue Gown. My old plants are from a foot to 18 inches in diameter, beautifully tufted and compact. Such a lot of plants shows well the value of this kind when cut back late in the autumn and allowed to flower freely during the spring and summer months. Florizel is indeed a gem, the plant blooming freely, the blossoms of large size, habit wonderfully dwarf and compact, while the colour—blush-lilac—is almost unique in these flowers, and very effective in the border. Christiana has been very fine for months past, and should be placed in the front rank as a creamy white bedding sort. The growth is spreading, the flowers large and of good form. Princess Louise, a new rayless yellow sort sent out by Mr. Andrew Irvine last season, is a distinct acquisition. Both this year's and last year's plants are now at their best. The blossoms

are only of medium size, but the colour is so rich and clear that their effect in the border is very pronounced. The habit of this sort is also very dwarf and compact. *Rosea pallida* has not made over large two-year-old plants with me, but this variety, like Florizel, is wonderfully free. Early in the spring there is very little difference in these two flowers, but as the season advances the colouring becomes quite distinct, and the beauty peculiar to each variety fully appreciated. As an individual flower Border Witch is very fine when the climatic conditions are not too warm, and because of this the best flowers are to be had early in the summer or during the cooler weather of late summer or early autumn. Two-year-old plants of this variety have been very fine for some time, but it is essentially a flower for the exhibition table, its want of fixity of colour telling against it for bedding. I have a number of plants raised from seed, of which Sylvia was one of the parents, and among these there are some very beautiful sorts. The blossoms are quite equal to, but not better than those of the parent, but they each have some distinct characteristic. In some instances the blossoming period is earlier than usual, in others the display may be later, and from one of these plants I gathered a beautiful spray of blossom during November last. The two chief properties are, however, possessed by these plants, viz., fixed colours and compact and spreading habit of growth.

There is a bright future in store for those interested in these plants for beautifying the garden.

C. A. H.

#### DURATION OF LILY BLOOMS.

WHERE a collection of Lilies is grown, the length of time that the flowers of some species will remain fresh and bright compared with others is very noticeable, while even the different varieties of one species vary a good deal in this respect. In the case of the upright cup-flowered section the blossoms of the different forms of *L. davuricum* or *umbellatum* are soon past their best, while those of the allied *L. croceum* and *L. bulbiferum* remain fresh and bright for a much longer period. Among the numerous varieties of *L. elegans* or *Thunbergianum*, the most fugacious of all is *lateritium* or *biligulatum*, a brownish red-coloured form, which in two days loses a good deal of its beauty. The bright crimson *Van Houttei*, on the other hand, is much superior in this respect. One of the showiest of all the *elegans* group is *bicolor*, a rich yellow flower flamed with red, but its beauty is very short-lived, the petals being much thinner in texture than in many others. I have been considerably impressed during the present season with the great length of time that the gracefully disposed nankeen-coloured blossoms of *L. testaceum* retained their beauty despite heavy showers, a burning sun, and occasionally rough winds. In lasting qualities the flowers of *L. testaceum* greatly surpass those of the *Madonna Lily* (*L. candidum*), one of its parents, but, on the other hand, the second parent (*L. chalconicum*) is in this respect equal, if not superior, to any other Lily. The petals of this almost appear as if they are cut out of wax, so great is their substance; hence, though this Lily does not flower till July—the hottest portion of the year—they remain fresh a long time. Of another group with thick petals much the same may be said, but not to the same extent as in the case of *L. chalconicum*. This is the *Martagon Lily* and its varieties, with the allied Japanese *L. Hansoni*, all small and long-lasting flowers. One of the most striking of all the varieties of *L. auratum* is *rubro-vittatum*, in which the golden band, which extends down the centre of the petal in the normal form, is replaced by a broad crimson one. When first expanded the marked contrast between the glowing crimson and the rest of the flower is very striking, but after two days or so the red portion changes to a kind of brown papery tint, and the flower then loses a good deal of its effectiveness. The pure unspotted form known as *Wittei* or *virginale*, on the other

hand, remains clear until the petals drop, and it is certainly the most elaste and beautiful of all the forms of *L. auratum*. Many of the Lilies are of an average duration of bloom, and of them

know four varieties of *Sidalcea malviflora*, all distinct in appearance and character. (1) The type, with short, close spikes of dark pink flowers and a leafy habit,

early. (2) A rose-coloured variety, with long, loose spikes of large pale rose flowers and very few leaves: this I call Warley Rose, later than No. 1. (3) A dark-coloured variety, with large flowers and upright spikes, flowering later still. I first met with this in Dickson's Chester nurseries, and I call it James Dickson. (4) Var. *Listeri*, of which as yet I know very little. I have frequently raised 2 and 3 from seed, and find them true and constant.—C. W. Dob, *Edge Hall, Malpas*.

**Self Carnation Royalty.**—Let me commend this truly magnificent self Carnation to the lovers of what is good in this way. It was raised by Mr. J. S. Hedderly, Sneinton, Notts, an old Carnation grower, to whom we are also indebted for Sportsman, scarlet flake, a sport from s.b. Admiral Curzon, which originated as far back as 1885. Royalty is of a rose tint, a strong grower, free blooming, with fragrant, large, full flowers, and finely formed shell petals. It does not split its calyx, as is the manner of some. I can strongly recommend this fine self, having grown and bloomed it this season.—R. D.

**Primula Trailli.**—It appears to me that Mr. H. Selve-Leonard endeavours to confuse a simple issue by weaving about it a web of specious rhetoric. The matter appears to be obvious enough. Let me ask, Was any evidence forthcoming to the floral committee to the effect that there is a distinctly recognised species of *Primula* known as *Trailli*; and, secondly, did the specimen shown as *Trailli* "differ structurally more or less from those hitherto tabulated," entitling it to specific rather than to varietal rank? The floral committee assumed without evidence that the specimen was *P. Trailli*, and they exalted it to specific rank, though I called in question its distinctness from *P. involucrata*, and recommended that before recognising it as a species and granting it an award of merit it should be referred to some standard authority, such as Kew, to determine whether the plant was entitled to specific rank before it was accepted as a distinct species by the floral committee. That was my simple contention, and I think it unfortunate in the interests of Mr. Wilson, as well as for the credit of the floral committee, that that course was not adopted. When at a subsequent meeting I placed on the table a flowering specimen of *P. involucrata*, the committee, practically conceding the point that they had been too precipitate, recommended that *P. Trailli* should be referred to Kew, and thanked me for producing the specimen of *P. involucrata*.—R. DEAN.

**Fuchsias at Sandhurst Lodge.**—Few plants are more beautiful than these, especially when a suitable place can be given them. At Sandhurst Lodge groups are placed on the turf at good distances apart, 6 feet to 8 feet, so that the plants can be seen all round. These groups are placed on a sloping piece of lawn with a walk on the lower side. Many of these plants are very large, some being grown as standards and others as half standards. They are grown in pots and plunged in the turf. At the time of my visit they had only just been placed out, but from the clean healthy leafage and strong shoots I could see they would give a good account of themselves during the

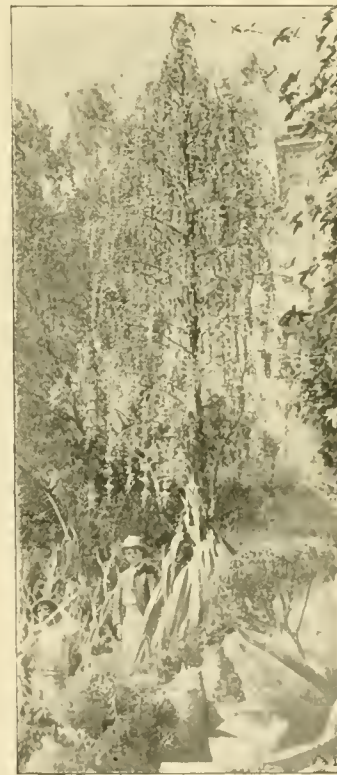
summer. I observed many other plants were used for placing on the turf as big plants. Amongst them worthy of note were several kinds of scented *Pelargoniums*, such as *quercifolium*, *Shrubland Pet* and others. These were very large plants, 5 feet or so high.—J. CROOK.

SINGLE HOLLYHOCKS.

SINGLE-FLOWERED Hollyhocks constitute a very beautiful race of hardy garden plants, and are even more decorative than are the doubles. A double Hollyhock is of course the florist's correct form, and the fuller and doubler the petals the more is it liked. I find these singles growing almost everywhere in small gardens, especially in suburban districts. Recently when taken all over the Carshalton and Beddington district I found them cropping up in little gardens everywhere, exhibiting such varied and beautiful colours that I was charmed with them. We see in strains of these three or four times the variation in colours found in the doubles. The direction in which crossing in able hands should be directed is in enlarging the flowers, still further varying the colours, and in obtaining if possible distinctly fringed edges. One variety which I thought very beautiful had flowers of a glossy claret hue edged with white. It served to show what variations and markings in these singles are possible. I am glad to see



*Acacia cyanophylla* in bloom in April in Mr. Hanbury's garden at La Mortola. (See p. 97.)



*Fourcroya Bedinghausi* in bloom at La Mortola. (See p. 97.)

that seed can be purchased cheaply. That fact probably explains why these flowers are so largely found in small gardens, although it is also possible that neighbours seeing them standing up so very prominently in a local garden beg seed, and thus the plants are widely spread. That form of increase, however, is not likely to lead to high-class selection. It is a good time to sow seed outdoors now, or, indeed, it may be sown up to the end of August, the plants standing in the seed-bed all the winter, transplant-

there is nothing particular to say. As the summer's heat is on the wane when the blossoms of *L. speciosum* commence to expand, they, of course, last a good deal longer than many of those species that bloom during the height of the summer. In the open ground, however, the heavy autumnal dews frequently disfigure the later blooms. That the season of the year at which the flowers expand has a good deal to do with their duration is shown in the case of the Neilgherry Lily (*L. neilgherrense*), that will sometimes flower as late as November, when the blossoms will in a greenhouse last for nearly a month, yet blooms that open in August are no longer lived than those of *L. longidurum* under similar conditions. H. P.

**Sidalcea malviflora.**—Last autumn a variety of this was described with large pale rose flowers as having been certified under the name of var. *Listeri*. From the description I thought it the same as one I have cultivated for many years which comes true from seed, and which I have since last autumn distributed as var. *Listeri*, but Mr. Barr has now sent me flowers of var. *Listeri*, and I find it different from mine, especially in the colour of the stigma. I now

ing early in the spring to the borders, where they will flower. No plants should remain to bloom longer than a second season, as it is when standing too long in the same ground that the soil gets dry and impoverished, and the Hollyhock fungus preys upon the stems and leafage. The more branching the plants are the better, as numerous spikes of moderate height are better than are fewer very tall ones. I hope it will not be suggested that spikes of these Hollyhocks would look well at flower shows. I hope someone will take these single Hollyhocks in hand and improve them largely. There is no telling what may be ultimately evolved. Selection may do much, and inter-crossing perhaps more. A. D.

#### CARNATIONS.\*

THE Carnation to-day is one of the most popular garden flowers, and regard for it has entered so deeply into the hearts of flower lovers that no mere caprice of fashion will ever appreciably lower it in public favour. The early stages of its evolution into a flower of such varied beauty were hardly chance results, for we know the wild type and parent, and one may see it to-day growing upon old castle and fortress walls, as at Rochester, in England; whilst across the Channel, in Normandy, high up on the ruins of ancient fortresses, it lives on, braving the storms in winter, in summer perfecting its by no means attractive flowers and ripening seeds that find a suitable seed-bed in the flint masonry. Here it knows no spot nor rust, and caterwauls and wireworms have not to be reckoned with. Such are the conditions under which grows *Dianthus caryophyllus*, which botanists agree is the type and parent of the Carnation. The Carnation was cultivated in England during the reign of Edward III. (1327-1357). Chaucer mentions it in 1386, calling it the "Clove Gilofre." The modern name Carnation was mentioned by Henry Lyte in 1578. Gerard, in his "Herbal," published in 1597, mentions a yellow Carnation that a merchant of London procured from Poland, "and which before that time was never seen nor heard of in these countries." In the beautiful flower pictures of the early Dutch painters Carnations are unmistakably and admirably portrayed. To-day we have several distinct classes diverse in constitution, in habit of growth, period of blooming, form of flower, and variety of colouring. Most interesting and instructive especially is the latest acquisition of a race adapted to the requirements of the cultural systems practised in this country.

It will be interesting to growers in this country to briefly review the several classes of

#### EUROPEAN CARNATIONS.

The earlier Carnation fanciers appear to have favoured the bizarre or oddly coloured varieties, for as early as 1769 the Carnation was classified according to colour vagaries under the names of flukes, bizarres, Picotees, and Painted Ladies. The varieties belonging to the three first named classes found many admirers; they became "florists' flowers," their improvement was taken in hand by a small body of enthusiastic florists who set about evolving their ideal Carnation in form as precise and perfect as though cast in a mould, its petals smooth and without fringed edges, the several colours as clearly and as sharply defined as though lined out upon a colour chart, and to assist the eye in seeing all the good points of the flower when placed upon the exhibition table, its petals were severally arranged with tweezers, supernumeraries with-

drawn, and when the "dressing" was complete the bloom was inserted in a round white paper disc. You may see this done yet at the annual shows of the English Carnation Society, and there is a tolerably large body of enthusiasts who take a delight in it, but it is not the type of Carnation that appeals to the great flower-loving majority. It represents, however, many years of patient work, and it is a wide gulf that separates the single one-coloured wild Carnation from the most perfect refined high-bred bizarre or fluke of to-day. A very old class is the Clove, the name having reference to the clove-like odour of the flowers, which are self or one-coloured. There are now many varieties belonging to this class in which we may embrace all selfs, and it is these that have been mainly instrumental in bringing about the greatly extended popularity of Carnations that marks the last decade. The flower, quaintly variegated in colour, did not appeal to many, but when it was to be had in clear, bright, and simple colours, wedded to a charming fragrance, it soon came into general request. In some of the best English gardens the Carnation, in fine self-coloured varieties, has been elevated to its rightful place as second only to the Rose, which it succeeds, in time of blooming. Carnations are distinctly summer bloomers, with a few exceptions, and to what extent they are fitted for outdoor culture in this country has yet to be determined. At a future date I may be able to speak of their behaviour, having some on trial. The so-called Tree or perpetual-flowering Carnations form another distinct class. In England they are grown in pots and pass the summer in the open air, being housed for the winter flowering. In their season of blooming, and its long continuance, they possess fixed characteristics. This class has its counterpart in this country, embracing those varieties now flowering on the benches. But whilst there are wintering-flowering Carnations in England and America, they form two well-defined classes.

The history of Carnation culture on this side of the Atlantic should not be hard to write. I believe that these American varieties sprang from the perpetual-flowering varieties raised and sent out by M. Alegatiere in France, as also did most of the winter-flowering kinds first grown in England. The varieties of European growth make large plants. They have a main central stem, and I have often seen plants 3 feet in height well furnished with side shoots, which produce the flowers on comparatively short stems. Here we have varieties of a close and tufted growth naturally inclined that way, and rendered more so by summer pinching, and when they flower, the flower-spike disbudbed to the terminal bud attains a length of from 12 inches to 24 inches or more, according to the kind, and if well grown the stems are strong enough to stand erect and support the flower. These stems are cut right down to the base, and when cut are quickly succeeded by others, and this continues for months. All the varieties in cultivation here partake of the characteristics of the earlier types of Carnations in having fringed petals and more or less of fragrance in the flowers; in short, they are more satisfying to the majority of flower lovers than the smooth-edged, geometrically-formed type of flower. So much for the American Carnation as a distinct type.

We may now briefly look at some of the individual varieties. It is not my intention to say much about them, for those generally grown to-day are superseded and discarded a year or two hence by novelties not always of superior merit. In the matter of cultivation, we have first to consider the

#### PROPAGATION.

If you would have the finest flowers a year hence begin now with select cuttings for stock. Choose for cuttings only healthy shoots from healthy plants. If you observe a plant with flowers deficient in size or colour avoid it, and you will then have no cause to complain of deterioration of varieties in cultivation. After the cuttings are taken get them into the cutting bed, which should be composed of good sharp sand. The cuttings need little preparation, but it facilitates rooting to shorten back the leaves by cutting off their tips. I used to think that the only advantage derivable from this was a slight check to the evaporation of the cutting's moisture, but an experiment with two batches, one tipped, the other not, proved that the cuttings that had their leaves shortened rooted four days in advance of those not so treated. After insertion give them a thorough watering, shade from strong sun, maintain a temperature of about 50°, and one's own judgment must suggest what other attention they need till they are ready to take out of the sand and prick into flats.

There is another fascinating method of raising Carnations, that is

#### FROM SEED.

Here, again, haphazard work is of no account. A law of nature shows the "like seeks to beget like," but in the Carnation there is a latent possibility of wonderful degeneration at one remove. I had a very fine collection of Carnations flowering in the garden, and there was not even a second-rate kind among them. A score of varieties in groups of from fifty to 100 plants of each represented a rigid selection from 100 kinds tried the previous year. I noticed many of them were forming seed-pods, so I selected some, watched them daily until the ripening, harvested good seed, sowed it the following spring, and in late summer planted out for next year's blooming 2000 as good plants as anyone would wish to see. I anticipated a grand series of seedlings, but was doomed to disappointment. Twenty-five per cent. of the progeny produced only single flowers; 50 per cent. of the remainder were double, but not so good as their parents. A few of the remaining 25 per cent. were selected and grown the following year, but the Carnation world is none the richer for that attempt to increase its riches. Profiting by this lesson, I went to work again, but resolved to trust to no chances. I carefully crossed the flowers chosen for seeding, hand-fertilising every one, and secured a number of fine pods of seed. The seeds were sown, good plants obtained, that ultimately came to the flowering stage. In this batch of 2000 plants only two plants produced single flowers; the rest were as good as their parent, and reds predominating in the seed parents, there was in the progeny the finest series of red seedlings I have ever seen. Quite a number were selected for another year, but I handled them no longer. I do know, however, that a few of them are still in cultivation, and one or two of the finest were named and distributed. There is here ample proof that if you would raise fine kinds you must select the parents and work with an object in view. The new kinds offered us each season by specialists are the outcome of the same careful crossing and systematic working on the part of their raisers. Even then, however, the blanks are many, the prizes few. The only justification for putting another kind on the market is either the possession of qualities superior to those of the variety it most resembles, or, if unlike any on the market, it conforms with them in every other point that goes to constitute the existing standard of highest merit.

\* Pa. e-r read by Mr. A. Heinington, Madison, N.J., before the M. ris Co. (N.J.) Horticultural Society, January 13, 1897.

## SUMMER TREATMENT.

Turning to the young plants that are raised from cuttings, the aim of the cultivator in summer should be the growth of a strong plant, calculated to yield the fullest possible crop of winter bloom, and this is best accomplished by planting out the plants in the open ground at such time as the season and locality warrants, May usually being a favourite month. The summer site and soil for the plants are important matters to consider. I remarked at the commencement that the wild Carnation grows up high and open, where it never suffers from a superabundance of moisture, and always enjoys a free circulation of air. Just as much does the cultivated Carnation want an open, airy situation and a free, well-worked soil of medium texture, neither too adhesive nor too gritty, well enriched, but not with fresh rank manure, which is peculiarly distasteful to the plants. If Carnations can be planted in succession to some crop for which the soil was previously well manured, it will be found quite rich enough, all it needs being deep digging or ploughing of the soil. If fresh food for the plants be absolutely essential at planting, give it in concentrated form, as, for example, bone-meal or wood ashes; separate or in mixture, both are first-rate Carnation manures. After planting, the chief details of summer treatment are keeping down weeds and pinching the main stems as they advance in length. The ideal plant to try and secure is one of low and tufted growth, with from six to eight shoots as near the ground as possible. If one has a large quantity of plants, it may be desirable to spray them with sulphate of copper once a week, since prevention is better than cure, but in private establishments, with but a limited number of plants, due selection of cuttings and proper care for the infant plants bring its reward in a comparative immunity from fungoid diseases. Soil that will grow good Roses will likewise grow Carnations, so it is needless to enlarge upon the preparation of the compost heap wherefrom to fill the benches. Lifting from the ground and planting on the benches can begin with safety in August; indeed, I am informed by one of the best growers that he likes to get all his plants planted on the benches in that month. This grower further advises what I would have hesitated to practise the shaking off entirely from the roots of all the old soil in which the plants grew in the field, as they thus start the more readily in the fresh compost. The quality of his stock warrants me in concluding that his practice on this point is sound. With bright, hot weather prevailing in August, slight shade and free syringing will be important factors towards future good results; but when the plants show evidence of getting established, less overhead moisture and abundance of light and air should be given. Given a light house that receives every possible ray of direct sunlight during the winter months, and an equable temperature of 50° to 55°, the chief winter items of labour are disbudding, watering, and syringing. If these matters are attended to, and later on food given to the partially exhausted soil, you need have no fear of failure.

**Cut flowers.**—A splendid assortment of outdoor flowers is available from the middle of July until the middle of August, and when preparing to stage some fifty varieties (not species) the other day the difficulty was not how to find them, but what to pick for the most effective display, and these flowers are now so much appreciated that I venture to send a short list. Phloxes were represented by Snowdon, A. McKinnon, Mrs. Miller and J. Thompson, and Pentstemons by four of

gloxinioides seedlings in different shades. *Galtonia candicans* and *Achillea* The Pearl supplied bold masses of white and were flanked respectively by *Eryngiums* and *Montbretias*, and other large vases were filled with cluster Roses and the early-flowering Sunflowers, *Helianthus rigidus* and *Heliosis levis*. A good selection of perennial *Gaillardias* gave brilliant colouring to another row, together with good forms of Stocks, *Antirrhinums* and the taller *Bellflowers*. Some of the best of the Carnations staged in separate varieties formed a good face to the taller things behind, *Uriah Pike*, *Ketton Rose*, *The Pasha* and the old white *Clove* looking remarkably well. Associated with these were Sweet Peas and the blue and white forms of *Platycodon Marietii*. The point as to species in collections of cut flowers at cottage shows has again been a difficult question, and where the wording of the schedule states distinct species, it is almost impossible to get cottagers to abide by it. In one instance where six collections had been staged only one exhibitor had adhered to the rules, and his, unfortunately, was a long way from the best. Remarks the reverse of flattering follow disqualification, which is, however, necessary in such cases, and I think varieties should in all cases be substituted for species until cottagers are better able to classify their productions.—E. B. C.

## KITCHEN GARDEN.

## MID-WINTER TOMATOES.

**TOMATOES** with me are much in demand all the winter. A few plants raised now for the December supply will be of great use to those who provide vegetables in quantity and need a varied supply. Plants are raised with so little trouble, that only a few words are needed on this point. It is useless to grow too late plants, as unless the fruits are set before October closes they will probably not set at all. For early spring fruiting late plants are valuable, as those kept quiet through the winter will come into bloom in February or early March. So far as my experience goes I have not been able to set the blooms from November to January. My first success with what may be termed mid-winter fruiters was gained by a simple experiment and at small cost. For many years I had struck cuttings for an early winter supply, but owing to a mishap I lost the stock and potted up some very poor seedlings which had been standing in seed pans for some time. With only cool house treatment from August to October these did well, set some fruit, though not placed in heat, and gave much better crops than I ever had from plants grown specially from cuttings. I have never struck a cutting since that date for winter fruiting. For mid-winter supplies plants ere this should be raised and fit to pot on. There are often a few surplus plants left over from a late spring or what is termed an early summer batch to provide a late supply, and good use may now be made of these. Avoid heat as the hardier they can be grown the better. My plan is to pot up, place in cold frames till the roots reach the sides of the pots and then expose freely night and day. Indeed, night exposure is important, as the night dews keep the plants clear of insect pests and induce a short compact growth. At this season I pot up into 6-inch pots, or if the seedlings are in say 5-inch pots they may be placed direct into the fruiting pots. In doing this care is needed in watering for a time. Do not give any manure; only a little bone-meal is mixed with the soil. Nine-inch to 10-inch pots are large enough to fruit the plants in. Pot very firmly and leave a fair space at the top to allow for later top-dressings and feeding when the fruit is formed.

I damp the plants overhead when the sun declines, and this is continued till the weather gets cool and the plants are removed to their fruiting quarters. If they set freely, which they should do by September, weak food, such as liquid manure, is given and the syringe less used as the flowers open. The plants to be a success must be studded with fruit at the time they are housed. They certainly set a few fruits when given more favourable treatment, but it is not wise to rely upon the crop secured too late. I place in low pits, not the best structures possible, but in gardens many shifts have to be made. The chief thing after housing is to air freely in favourable weather, leaving air on all night. Keep the plants clear of white fly, one of the worst pests the grower has to contend with. This is readily kept down by the useful X L All fumigator; one dose a month will effect a clearance, and is far superior to tobacco paper, which does not always kill the pest. The plants are trained to a single growth not too far from the glass, and the winter temperature after housing is 55° at night and 10° higher by day, with air on all favourable occasions. My aim is to secure medium-sized fruit and a medium crop, as the season is not favourable to a heavy strain on the plants. There is no difficulty in securing a heavy crop, but there is in finishing. I have had plants collapse when allowed to bear too much. Far better get a succession. When the large fruits are gathered the smaller swell freely. Exhibition fruits are out of the question. Grow medium-sized kinds, not those noted for mere size, as at the season named one never minds a ripe Tomato being medium-sized if of good quality. For years I have found *Conference* one of the best winter fruiters; *Early Ruby* and *Frogmore Selected* are also excellent. These are larger than *Conference*, but very free setters and of good quality. From plants which fruited in December I have obtained a second crop in April by getting new growth and giving ample food. To do this, it is necessary to keep plants warmer than advised after the fruit is cleared, but I do not recommend this plan, as by making a sowing at this season and growing plants for the purpose, a better crop is secured. These are not allowed to fruit till early spring. They are placed in their fruiting pots in October or February, according to their strength. Such plants are far superior to those sown, say, in December for first crop, give less trouble and need less heat.

G. WYTHES.

**Lettuce bolting.**—Has "S. H. B." (p. 55) tried *Continuity Cabbage Lettuce*? This is a long way the best I have had from a non-bolting standpoint. A batch on a south-east border has been firm and solid for some time, and not one of them has run. I look upon this as a first-rate variety, for, in addition to the excellent characteristic above noted, it grows to a great size and is very crisp and fresh eating—in fact, more like a *Cos* than a *Cabbage*.—E. B. C., *Claremont*.

**Autumn-sown Onions.**—These constitute an important item at all vegetable exhibitions at this time of the year, and they invariably present strong features on allotments or in cottage gardens. When being judged, as in July, they are usually in their finest form. But, all the same, it is but natural to ask what useful purposes do these large bulbs serve in domestic economy, for if not profitably used they can have no real garden value. That the bulbs have a very short life is well known. Some of the white-skinned varieties are no sooner ripe than they become soft and useless. The practice of growing soft *Tripoli* and Italian varieties in preference to good hard keepers generally prevails. Now that it is so much the rule to raise some plants of the finest

varieties by sowing seed under glass in January and transplanting outdoors in April, it seems hardly worth while to trouble about autumn sowings at all, except to give green plants for pulling in the winter and spring.—A. D.

**Endive.**—The time is now at hand when the earliest batches of Endive will be sown. Care as to dates is of more importance with Endive than with some autumn-sown crops, as if sown too soon the plants in ordinary seasons grow too large before lifting time, and the result is running to seed early in the spring. On the other hand, late plants do not reach a normal size, especially if the autumn is wet and cold, and the plants are hardly worth blanching. In this locality from July 20 to 25 is a good time to sow for main crop, and, as with Coleworts, so with Endive, a north border is a capital place. Here the seed quickly and freely germinates, and an occasional watering keeps the young seedlings moist and in a growing state. Few gardeners grow very much of the Moss or Green-curl'd varieties, as they stand frost and damp so badly. My favourite variety is Fraser's Broad-leaved. This is a fine sturdy strain and easily blanched, nor does it run to seed so quickly as some.—J. C., *Notts.*

**Tripoli Onions.**—The season is fast approaching for sowing the Tripoli section of Onion to stand the winter, and the sooner the ground is got ready the better the crop will stand, as the seedlings always seem to make a better start in firm ground; indeed, several gardeners who had for years experienced great difficulty in securing a respectable crop of Tripoli Onions found a way out of the difficulty by sowing on ground from which Strawberry plants had been cleared. The same individuals covered a portion of the Strawberry plot thickly in autumn with cow manure, allowing it to remain on through the winter so that the rains might wash down the nutriment, removing it in March and sowing their spring Onions in drills without digging of any kind. No crop is more injured by thick sowing than Onions, as when crowded together it is utterly impossible to remove the surplus seedlings without loosening those that are to remain, and when blown to and fro by high autumn winds they seldom winter well. Even when sown fairly thin early thinning is advisable, as soon, in fact, as the young seedlings can be handled. All points considered, perhaps the best variety is the old Giant Rocca. It grows to a large size, is of fine globular shape, the skin bright brown, flavour mild and delicate, and last, but not least, a good keeper. Red Italian is another capital Onion. For using early in the spring, Early White Naples and The Queen are grand silver-skinned varieties.—J. C.

#### PEAS AND DROUGHT.

FEW vegetables suffer sooner from heat and drought than Peas in light soils, and this summer they have felt the dry weather severely. Some kinds suffer more than others. I notice those of a dwarfer and stouter build, with thicker stalks, are the best in dry seasons. I am aware mulching in a measure will greatly assist the plants. I strongly advise this before the Peas pod, as once the pod-growth ceases mulching is not of much use. It may assist in filling the pods, but it does not add to new growth, with the result that a portion of the crop, which would have been preserved had mulching been done earlier, is lost. Several dry summers in succession show the value of sowing the later crops, or what may be termed the July Peas, in trenches. Treated thus, one in a measure defies drought. There must be a liberal supply of decayed manure in the trenches for the roots to lay hold of, and though I have seen this latter treatment objected to on the score of failing in wet seasons, I do not think it can be termed failure, as though the haulm certainly makes a gross growth, it also bears a much heavier crop, and one can easily check growth by stopping and sowing much thinner. Peas sown too thickly are the first to feel the effects of drought. In wet seasons the same difficulty

occurs, as though there is less root trouble. top-growth is so gross and attains such proportions, that pod-bearing is delayed. I am aware, no matter how much one cares for certain kinds of Peas, in a hot, dry season they are soon over and the Peas when cooked are deficient of flavour. There is need of more careful selection of varieties in dry, poor soils. Fortunately, of late years the Pea raiser has given us better habit, and though size of pod is looked upon with more favour than it deserves, we have a good selection of high-class Peas. Some of the very large-podded varieties are not the best flavoured. The best flavour will be found in Peas of medium size and what are known as continuous bearers, that is, those which bear from the base, or nearly so, and which have a later crop on the top of the haulm. I do not condemn the largest varieties; they have their use, but in dry seasons I find



A group of Echiniums from the Canary Islands at La Mortola. (See p. 97)

them less valuable when Peas are required in large quantities. S. H.

#### SHORT NOTES.—KITCHEN.

**Pea Alfred the Great.**—This is one of Laxton's fine varieties that seems not to have got largely into cultivation, yet it is finer in pod than is Ne Plus Ultra, to which it bears close resemblance in growth and in quality of Pea. It is really one of the good varieties that has not earned fame, probably because it is not a show one.—D.

**Pea Bunyard's Early Dwarf** is a very hardy variety, as in Kent it is a common rule to sow it late in October or early in November, the plants usually wintering well. So treated it crops very early. It is a heavy podder and the Peas are of excellent quality. As it is but 2 feet in height when staked, a large quantity can be grown on a small area of land.—D.

**Pea Boston Unrivalled.**—But recently put into commerce, this fine Pea is giving great satisfaction. It bears some resemblance to Telephone, but has longer and better filled pods and is all round a greater cropper. It is best staked, as it grows from 4 feet to 5 feet in height in good soil. This and Alderman represent two of the finest podded Peas now in cultivation.—D.

## GARDEN FLORA.

### PLATE 1130.

#### RHODODENDRON MRS. THISELTON-DYER.

(WITH A COLOURED PLATE.\*)

THIS Rhododendron is one of a new race which promises to add much to the beauty and variety—great as these already are—of the hardy garden Rhododendrons. Their chief interest and value consist in their bringing into the field a species which hitherto has had no share in the origin of hardy varieties of Rhododendron, and is, moreover, absolutely distinct from those that have. This species is *R. Fortunei*. It is a native of China, and was discovered and introduced by Robert Fortune about forty years ago. The following communication from him to the *Gardeners' Chronicle*, Oct. 29, 1859, regarding its discovery reads curiously to-day, when so many Rhododendrons have been discovered in China, that this country is now considered as likely to prove the headquarters of the genus, so far as number of species is concerned:—

When on one of my long journeys in the province of Chekiang (west from Ningpo) I accidentally met with this fine species amongst the mountains, about 3000 feet above the level of the sea. The discovery was most unexpected, for although the lower parts of these mountains are covered with the allied genus *Azalea*, no Rhododendron has been known to exist in this part of China. The specimens I met with were of all sizes, from a year's seedlings to full-grown plants, the latter being 10 feet to 12 feet high. The large plants had been covered with flowers a short time before, and the ground underneath was now strewn with decayed blossoms. I was told on all sides by natives that the plants were most beautiful objects when in full bloom. When I returned to the same place in the autumn I found an abundance of seed, which has vegetated freely in Mr. Glendinning's nursery at Chiswick. The only other species of Rhododendron known in China is *R. Championæ*, a pretty plant discovered on the Hong-Kong hills.

Instead of there being only two Rhododendrons known in China, Mr. W. B. Hemsley, in the "Index Flore Sinensis," enumerates over sixty species native of that country. But of all the sixty or more Rhododendrons that have since been discovered, none can be said as yet to give promise of equalling Fortune's species as a useful and beautiful garden plant. The largest specimen at Kew is about 8 feet high and more through; its leaves are smooth, of a rather light green above, slightly glaucous beneath. The flowers are produced in early May in loose trusses, and are of a lovely blush colour on first opening, afterwards becoming

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.

PHODODENDRON MRS THISELTON-DYER





almost white. Two characters it possesses which, taken together, distinguish it from all the remainder of the true Rhododendrons (as distinct from the Azaleas) grown outside; these are, first, seven segments to the corolla (instead of the normal five), and, second, a very pleasant and slightly spicy fragrance. When the large plant in the Rhododendron dell at Kew is well in flower—and this year it bore many scores of trusses—the fragrance is perceptible several yards away, especially on dewy mornings. It is a near ally of *R. Griffithianum* (Aucklandi),

W. T. Thiselton-Dyer—was obtained. It flowered at Kew in May, 1896, and bore numerous trusses of the type here figured. The truss is more compact than that of *R. Fortunei*, and the flowers—individually measuring between 3 inches and 4 inches across—are of a lovely shade of rosy pink, relieved by a blotch of rich maroon at the base.

Shortly after Mr. Luscombe commenced working with *R. Fortunei*, Mr. G. Paul, of Cheshunt, made an extensive series of crosses between that species and some of the best garden varieties, one

(Luscombe), *Luscombei* (Luscombe), *Luscombei splendens* (Luscombe), *Luscombe No. II.* (Luscombe), *Duke of York* (Paul), *Duchess of York* (Paul), *H. M. Arderne* (Paul), *Helen Paul* (Paul), *Profusion* (Paul).

What some will consider a defect in this new breed of Rhododendrons from a garden standpoint is their flowering so early in the season (the first week in May), which renders them liable to damage by late frosts. But their delicate and lovely colouring, their freedom in flowering, and the fact that they introduce a



*The yellow Banksian Rose covering an ancient arch at the entrance to the pergola, La Mortola. From a photograph sent by Mr. Hanbury. (See p. 97.)*

which is, perhaps, the noblest of all Rhododendrons.

The first to make use of the species for purposes of hybridisation appears to have been the late Mr. Luscombe, an enthusiastic amateur cultivator of Rhododendrons living in Devonshire. He crossed it with *R. Thomsoni*, which produced the fine varieties *Luscombei* and *Luscombei splendens*, which have been alluded to in previous numbers of THE GARDEN. This cross appears to have been made about 1880, and about the same time he also crossed the species with several varieties of the ordinary garden type, and it was from one of these that the beautiful Rhododendron now figured—Mrs.

of which, curiously enough, produced a variety identical with the *R. Mrs. W. T. Thiselton-Dyer* raised by Mr. Luscombe. Visitors to the May fortnightly meetings of the Royal Horticultural Society and to the Temple show, both last year and this, will remember several other of these *Fortunei* hybrids being exhibited by Mr. G. Paul. Some of the best have obtained awards of merit, and two—called the *Duke of York* and *Duchess of York*—were given first-class certificates at the Temple show of 1895. The following is a list of the *Fortunei* hybrids known to me, although Mr. Paul has doubtless named several others: *Mrs. Thiselton-Dyer* (Luscombe and Paul), *Frances Thiselton-Dyer*

new type into our gardens will commend them to lovers of hardy shrubs. Some of Mr. Paul's plants have distinctly fragrant flowers, and some have six or seven segments to the corolla.

W. J. B.

**Tufted Pansy White Duchess.**—This, the most refined flower of the *Duchess of Fife* family, was seen in fine form at the recent show of the National Viola Society. Blossoms of *White Duchess* are usually of even form and somewhat oval in shape, while the edges of the flower are very regular. The blossoms are white, distinctly and irregularly edged blue, with a yellow eye and a faint suffusion of the same colour on the lower petal. There appears to be another flower bear-

ing the same name, but sufficiently distinct from the original to permit of a separate name being given to it. The flower is of the same shape as its prototype, but slightly corrugated at the edges, while the colour markings are much deeper and more distinct. I have the two plants growing almost side by side, and there is no doubt about their distinctness.—D. B. C.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**LATE PEAS.**—Although there have been frequent rains of late in different parts, we have unfortunately had next to none in these gardens for upwards of three weeks, and at the present time many crops are suffering through the dry state of the ground. Some of the midseason Peas were attacked with thrips, but fortunately the later crops are so far free of this pest. Watering and more mulching have been necessary in our case to keep the haulm clean and healthy, but this extra attention is not begrudged so long as good crops are secured. Any rows of the tall growing varieties whose haulm is likely to fall away from their sticks should have additional supports, either by using some more tall bushy sticks, or perhaps, what is better, driving in some light Larch poles on each side of the row 18 feet to 20 feet apart, and looping the growth up with stout cord.

**MUSHROOMS.**—In many gardens the culture of Mushrooms is only attempted during the autumn and winter, when they can be produced much more freely than is possible through the heat of summer. Where the manure has to be collected piecemeal and several weeks elapse before sufficient can be obtained to form a bed, care is necessary that it does not become overheated or too dry. It should be spread out 9 inches or a foot in depth in an open shed or where it is protected from rain and turned twice a week. If there is a danger of its getting too dry, cover it with some old sacks or matting. In the meantime the house should be prepared in readiness for forming the beds. Very often a quantity of rubbish is allowed to accumulate in the Mushroom house, which tends to the increase of woodlice and other vermin, which often prove destructive to the crop just as the small "buttons" are pushing through the surface. Where these have been found troublesome, endeavours should be made to destroy them either by trapping or some other means before the new beds are formed. A few Cabbage or Lettuce leaves placed on the floor in the evening will entice many to collect, when they can easily be killed with hot water. The walls, too, will be all the better for a dressing of hot limewash, which will keep the house sweet. If the building used is heated with hot water, see that this is in working order, so that no hitch is likely to occur at the approach of severe weather. It is unwise to use up old spawn left from last year, as this may fail to produce a single Mushroom and all the time and labour will be in vain. Endeavour to obtain the spawn from the most reliable source, even though a high price be charged for it.

**CABBAGE.**—Keep a sharp look out on seed beds of this and other Brassicas, and protect them from the ravages of birds and other vermin. Plant out good batches of Coleworts and others of the same family as ground is cleared, and they will come in useful during the early winter months after Peas, Beans, and the like are over. Another sowing of Ellam's Early should be made, especially if those put in a fortnight ago have not come up so well as one would wish. Plantations of Cabbages that have furnished a supply during summer will yield a serviceable second crop in the autumn if the old stools are freed from decaying foliage and the ground between them kept free from weeds, and the surface soil made loose by frequent hoeings.

**TRIPOLI ONIONS.**—These will now be as large as one requires, whether for exhibition or home

use. It is best to lift the bulbs carefully as the tops show signs of ripening, and store them in a position where they will mature gradually if not required for immediate use, as there is a danger when they are left in the ground and heavy rain follows of new roots forming and the bulbs splitting, when they are useless for the exhibition table, and they also fail to keep properly for any length of time. I hear of several instances where mildew has played much havoc with spring-sown crops. This is always regrettable, as it is seldom any really sure remedy can be applied to save the bulbs. A dusting of sulphur may sometimes arrest the spread of the disease, and on no account should the crop suffer by being over-grown with rank weeds.

Goodwood.

RICHARD PARKER.

### HARDY FRUIT GARDEN.

**FIGS.**—The young wood on wall trees should be kept thin, as the shoots which will bear another season must have every opportunity of becoming properly ripened. If the trees have become at all crowded, the growths should at once be thinned out, retaining those of medium strength, as such will bear the best and most fruit next year. Trees carrying good crops may be assisted with liquid manure if their roots are confined to narrow borders. Barren or nearly barren trees should not be watered, especially if they are making quantities of gross sappy wood, and such should be rigorously dealt with by root-pruning and confining their roots to a circumscribed area in the autumn. On warm days the trees will appreciate a wash with the hose or garden engine, but this must be discontinued once the fruits commence to ripen, otherwise spotting and decay will soon set in.

**OUTDOOR VINES.**—These are still to be met with growing on old farmhouses and cottages, and during the past week I have seen many such bearing excellent crops of fruit. If the autumn should prove fine and warm, the Grapes will ripen and prove fit for eating. The bunches should now have all the light and air possible, and all young growths should therefore be kept persistently stopped. Hardly anyone thinks of thinning out the bunches on outdoor Vines, nevertheless it is a good plan to do so, as the remainder not only benefit by it, but the berries also grow to a larger size and ripen all the more quickly. Vines growing against chimneys and under wide overhanging eaves are apt to become excessively dry at the roots unless watered occasionally, more especially if the border in which they are planted is largely composed of mortar rubbish and brick-bats. A thorough soaking of water in such cases proves beneficial, and if this is followed up with a soaking of diluted liquid manure a few hours afterwards, very much better results will follow in the shape of finer fruit.

**RASPBERRIES.**—The fruit having been gathered from the summer fruiters, the old canes are no longer of the slightest service. They should therefore be cut out, and the young canes if thinned out as advised, should afterwards be fastened to the stakes or trellis. If thinning has not had attention, get it done at once, leaving just as many as are required and no more, and avoid overcrowding. If sewage or liquid manure be plentiful the plantation may be soaked with it when properly diluted again and again during dry weather, as this will ensure excellent results another season and give a further mulching if necessary. Autumn fruiters are making strong growth and promise an abundant crop. To secure the best results, the canes must be kept moderately thin, whether several are tied together and secured to stakes, or trained on wire trellises. If allowed to become crowded much of the produce becomes spoilt should the autumn prove a wet one. Thinning if requisite had better be done without delay, and attend to tying as the canes lengthen out, both to prevent them from being blown about and broken with the consequent loss of fruit, also to preserve a neat and

tidy appearance. Liquid manure is also of the greatest service to these, especially if the stools are aged and the canes thin and weak.

**MORELLO CHERRIES.**—If black fly has taken possession of the points of the young shoots, the nets had better be removed for the time being, and after damping the affected parts of the trees lightly with a syringe, dust tobacco powder over the fly pretty thickly. In a few hours' time or after the powder has had time to do its work, well wash the trees with clean soft water, and if one application is not sufficient to rid them of the insects, repeat the dose next day. The water must not, of course, be applied with too great a force, or the ripening fruits will be injured, but if care is exercised the washing can be done without harm resulting. If these Cherries are required to hang late, they must be closely netted. Many people greatly appreciate Morellos when fully ripe, especially when the fruits are dipped in clear syrup and dried before being sent to table. For bottling they must not be allowed to become too ripe, and just when they assume a dark purplish hue is the right time to gather for this purpose.

**APRICOTS.**—As these are ripening fast, the trees will need a look over every second day, when the ripest and largest should be held over for dessert, the smallest sent to the kitchen, and the medium-sized ones used for bottling in a whole condition. For the last purpose they must not be too ripe, otherwise they break during the process of bottling, and the same remark applies to fruits that are to be preserved in syrup. When all the fruits are gathered, give the trees a thorough washing, as it is a great mistake to run away with the idea that further attention is unnecessary because the crop is done with. Root watering should also have the same attention as heretofore, and see that all breast-wood is kept pinched in.

**PEACHES AND NECTARINES.**—The trees now need another look over both to regulate and fasten back the young wood and also to keep lateral growths on the same pinched. Trees on which fruits are fast swelling should have all the moisture they need at the roots, and a stimulant also if the age of the tree, want of vigour or weight of crop should demand it. The leaves should also be turned or tied on one side, as I am no advocate of the barbarous method of cutting them off altogether, so that the fruits are fully exposed to facilitate ripening, and until they commence to soften, syringe or wash these and the other trees also regularly whenever bright warm weather prevails. The trees of early varieties should be overhauled as soon as relieved of their crops, when, in addition to cutting out the now useless bearing wood, remove surplus shoots should there be any so as to give the remainder every chance of becoming thoroughly ripened. See that they get a sufficient quantity of water at the roots, and if necessary renew the mulch. Should wasps, bees and flies prove troublesome, traps consisting of bottles partly filled with sour beer and portions of damaged fruits cut up and mixed with it, suspended on the walls, generally answer well and kill great numbers. Wasps' nests should also be searched for and destroyed within a radius of a mile from the garden. A few pence paid as a reward for their destruction acts as a great incentive towards keeping these pests within limits.

**OTHER WALL TREES.**—These will require another look round to keep them in good order. If the attendant carries a nail bag or a few strands of raffa with him, young shoots in need of further support in the way of tacking in or tying back can be attended to at the time the stopping is being done. In woodland districts the earliest varieties of Pears and Plums must be netted, otherwise birds will soon devour the lot—at least, such is my experience.

**LATE STRAWBERRIES.**—As the beds become cleared of fruit, store the nets away and trim up the plants if a sufficient number of runners has been secured. Some late varieties, such as Oxonian, are best treated as biennials, as the returns are poor indeed if such are kept the third season. A. W.

ROSE GARDEN.

ROSES UNDER GLASS.

It is surprising that amateurs and gardeners have not taken more to the culture of Roses in pots, considering the very effective displays that visitors to the Temple shows of the Royal Horticultural Society have been accustomed to look for for several years past. The large market nurseries for the production almost exclusively of cut Roses in the early months of the year are evidence, if any were needed, of the popularity of the flower, notwithstanding that the summer and autumn furnish an abundance outdoors. The lovely Tea Rose is always welcome, be it for bouquet, wreath, or house decoration, and as the fashion is extending in cutting Roses with long stems, their true decorative character is at once apparent. I am convinced that the failures in the past in the cultivation of pot Roses can be mainly traced to the method adopted of growing them in a greenhouse of mixed subjects. It would be far better to devote a house or houses entirely to their culture, be the structures ever so small.

STRUCTURES.

The one I have found the most useful is the span-roof running north to south. The length may be from 50 feet to 100 feet or less, and the width about 18 feet to 20 feet. Ventilation is a very important matter, and should be carefully provided. The top ventilators I prefer on both sides, east and west, but instead of the hinges being placed near the ridge, they should be at the bottom of the light. This will enable us to keep the plants from the cold gusts which sweep down on them when the lights are hung from the ridge, as in the method I recommend the wind passes over the house and the air is admitted very gently. Side ventilators are advisable, although for early forcing they will not be often needed. The top lights composing the roof should be movable. This is of great importance if the Roses are planted out instead of being grown in pots. We are then enabled to give our plants the beneficent rains and dews. Roller blinds would also be of great benefit for shading, for although Roses dislike shade when growing, there are times when we desire to keep the blossoms back, and then shading is necessary in some form. For pot work the sides should have staging fixed for dwarf plants, and a brick bed in centre for standards, half-standards, or climbers. A path should run round the house between centre bed and side staging. A row of 4-inch pipes would be necessary and would (unless very hard forcing were desired) be sufficient. A tank for water is very important, as it is then chilled and can be given to the plants at the same temperature as that in which they are growing.

PLANTS TO COMMENCE WITH.

If the desire is to go in for exhibition, the largest proportion should be of the H.P. or H.T. class, as they are more lasting and would blossom without much heat about the time that the chief exhibitions are held. The H.P.'s and H.T.'s are best grown one year outdoors previous to bringing into the house. Plants should be potted in October from the open ground. Plunge them up to the rim of the pot in ashes or cocoa fibre and carefully protect from May frosts. Give them frequent weak doses of liquid manure during summer. They will not require repotting the first year provided the drainage is looked to in the autumn. Keep the plants outdoors till November, then remove to a cold pit or house. The Teas are best grown under glass. Standard Teas can be planted out or grown in pots. I would prefer to plant them out. It is well known that the finest Teas are produced on standards, although for cutting, the extra-sized plants are good enough. It will thus be seen that to grow the H.P.'s and Teas together in one house would be detrimental. The H.P.'s are finer in quality

in every way if grown very steadily, merely using sufficient artificial heat to keep out frost and to keep the atmosphere buoyant. A very important matter in the culture of Roses under glass is the

PRUNING.

of the plants. The time to do it must be regulated by the period at which they are required in flower. If early blossoms are wanted say by March, prune the plants about the end of December. This applies to Teas and Chinas only. If H.P.'s and H.T.'s which partake more of the H.P. character are required in March, then November would be the time to prune. Of course these plants should have been brought under cover a month previous to this. The H.P.'s need rather hard pruning, but the Teas must be very sparingly cut unless show blooms are wanted. If the latter, I would recommend cutting back to good plump buds, but if flowers for cutting are desired, then a good thinning of the weak shoots will be sufficient combined with moderate pruning back of the stronger growths. Climbers need different treatment. Climbers grown in pots can be splendidly flowered if their long shoots are trained spirally around three or four sticks placed in the pot. They will blossom from nearly every eye, and each season these laterals can be cut back ready for another supply. Semi-climbers are very pretty objects when trained in pillar form, and produce an abundance of flowers by this method. Such plants need very little pruning, simply removing milfy growths. When plants are pruned, the next point to consider is their

TRAINING.

I am very much averse to so training any plant that by so doing the character of growth is altered. There is absolutely no need to distort plants into the hideous, one-sided objects sometimes seen. The chief consideration in training a plant, in my opinion, should be to enable its foliage and flowers to perfectly develop. After pruning, tie a string round the under side of rim of the pot, then tie raffia on the shoots and gently draw them down to the string, just enough to shape the plant. When the plant has made shoots and these shoots show the buds, then sticks can be placed in the pot and shoots tied to them. A taste for form will soon tell us what is the most suitable shape to fashion the plant to. Standard Teas of a climbing nature produce more flowers if their shoots are bent in an umbrella fashion. Roses of the Polyantha and China tribes I prefer to grow naturally, merely tying out the skeleton plant when first pruned. When this first tying out is accomplished the plants should be carefully arranged in the house, so that the sun is enabled to shine on all of them. I prefer to place the plants (if in large pots) upon bricks or pots, taking care not to impede drainage or admission of air to roots through the hole in bottom of pot. If a side stage is used to bring plants near the glass it should be made so that it can be covered with ashes. When plants are syringed these ashes absorb some of the water, which enables a nice moisture to arise around the plant in the hot part of the day. The

TEMPERATURE

of the house is of great importance. It must always be borne in mind that we have, as it were, to make the weather under glass what Roses delight in outdoors from March till June. I am no advocate for strong heat for Roses under glass, believing that the best quality is produced in a moderate temperature. Especially is this the case with the H.P.'s. The finest specimens I have ever seen of this class under glass were grown on what is termed the cool system, giving all the air possible on most days, and just sufficient artificial heat at night to keep out frost and to give a buoyancy to the atmosphere. The Teas, however, are the better for quick growth. For most varieties of Teas a night temperature of about 50° to 55°, rising in the daytime to about 60°, is suitable. Of course a few degrees more would be allowable if bright sunshine prevailed.

Another very important matter in the successful management of the Rose house is

VENTILATION.

Roses dislike cold draughts, but, on the other hand, they delight in a buoyant atmosphere, free from stuffiness. I like to mure my plants from the commencement to plenty of air, and there are very few days and nights when I do not leave more or less top air on. Even if Roses are grown without artificial heat by day, a little should be turned on late at night, and this, combined with a small quantity of top air on, is a good preventive against the formation of dewdrop on the foliage, a sure precursor of black spot, so injurious to Roses. To avoid failures in pot Rose culture there must be no sudden checks. If a bright day is certain, do not wait until the sun raises the temperature rapidly, but give top air early, certainly when the thermometer stands at 65° in the Tea Rose house and about 55° in the H.P. house. If a commencement is made by giving side air, even with the Teas, it is surprising how they become accustomed to it, but grow Roses on without side air, with the consequent tender foliage, and then admit side air because it is a fine day, and a crop of mildew will be the result.

WATERING AND SYRINGING

must not be deputed to just anyone, but the most careful man should always undertake the watering and syringing of the Roses. No water will be required until plants have made about an inch of growth. They will have the appearance of being extremely dry, but it is better for the young roots that they should be kept so. The first watering should be a thorough soaking. If plants are not too large, immerse them in a tub or pail until water runs out at the bottom and the air bubbles cease to rise. If this is not practicable, give three or four good waterings in one day until thoroughly soaked. After this great care must be taken with the watering. I like to look the plants over each morning before syringing. After the first watering we shall find a syringing amongst the pots will be all the water needed for some time. Until plants are well advanced in growth, it is better to keep them rather on the dry side. Syringing the foliage must only be done on bright days, and then early in the morning, say about 9 o'clock, so that any excess in moisture may be dried up before evening. The soil should be frequently stirred after watering to keep it sweet. If plants are put on bricks or pots, so that water can pass away freely, the air will follow the water to the roots to their evident benefit. Of course, lengthening days will increase evaporation; consequently, more moisture must be given. Liquid manure is very beneficial to pot Roses, but weak doses and often are better than strong ones. Avoid strong artificial manures. Generally speaking, Roses do not require liquid manure until the buds appear; then they can have some about once a week. Do not imagine because a plant is strong and vigorous that it requires no stimulant. It is such as these that do require it; whereas weak plants, if we tolerate them, should have it withheld. Urine from the stables is good, but it is very strong, and the water must only be tainted with it at first. Sheep droppings make a splendid liquid manure; so also does cow manure. Some fresh cow manure, bone-meal and wood ashes put together in a tank would make a grand liquid manure if carefully applied in weak doses. A little liquid manure sprinkled on paths at night is helpful to the foliage, but it must not be overdone, or we shall have fine foliage and poor flowers. A good sign of health in a pot Rose is fine dark green leathery foliage, and when the plant dries up quickly we may know there is healthy root action.

DISEASES.

such as red spider and green-fly, are the worst enemies. The former can be best combated by water, but it is of no use spraying overhead. A good force must be directed upon the underside of foliage. Vaporising is the best means of settling

the green-fly. Worms are often troublesome, and if allowed to go unchecked they soon choke up the drainage. A watering with lime-water will move them and do no harm to the roots. Mildew is one of the very worst enemies the Rose grower under glass has to contend with. There are endless so-called remedies, but the best plan is to carefully avoid giving a check to the plants. This check can be given in several ways: a sudden rising or lowering of the temperature, unchilled water, or too strong doses of liquid manure. Avoid these and inure the plants from the commencement to judicious ventilation, and little trouble will be caused with mildew. If it should come, sulphur and lime applied to the pipes is a safe remedy. I have not much faith in dusting the plants with sulphur; I believe the sulphur fumes to be the best method of destroying the fungus. A very safe plan is to syringe plants with a fairly strong solution of soft soap-water. Let it remain on about half an hour, then syringe off again, using soft or rain water each time.

#### REPOTTING.

After flowering, the H.P.'s and H.T.'s should be turned outdoors, standing them on bricks and surrounding the pots with coal ashes or old fibre, and after a week or two they may be repotted, although many defer this operation till autumn. The Teas should be kept in the house to make a second growth; then they can be put outside. It is this second growth, well ripened, that will produce the finest Roses the next season.

I believe the best time to be July for repotting this class of plants; they are then enabled to lay hold of the new soil and build up the buds for next season. During summer and autumn the plants must not be neglected. If plunged they will not need so much water, but care should be taken to prevent them drying too much. Weak doses of liquid manure are also beneficial at intervals, and all flower-buds should be kept picked off. By potting when wood is ripened, less check is caused to the plants than if covered with young growth, as they frequently are in autumn. The compost I employ for pot Roses is good fibrous loam three parts, well-decayed cow manure one part, leaf-soil one part, a small quantity each of bone-meal and wood ashes or powdered charcoal. The pots should be scrupulously clean and well crocked. On to the crocks some turfy pieces of the loam should be placed, and in potting see that the soil is well rammed in, that is, supposing it is in a good condition, neither too dry nor too wet. It is as well to mix up soil a week or two before using it and put in a covered shed with open sides.

#### PLANTING OUT

Roses under glass is a grand way of growing them, and for cutting perhaps the best if house room is no object. A correspondent said the other day that he was not successful with La France under glass. He should see a house of this variety and Duchess of Albany at Messrs. Beckwith's cut flower nursery at Hoddesdon, and he would not soon forget the sight. Some hundreds of plants planted out produced last April quantities of grand blooms, which could be cut with 2 feet to 3 feet long stems, a method of cutting, by the way, which is in much request for table decoration, and particularly suited to fine massive Roses of this type. It would not do to attempt it with pot plants unless we were prepared to discard them after the second season, but planted-out Roses seem to have the power of recompensing themselves if the lights are movable and heavy mulchings of cow manure and bone-meal are given. Such kinds as General Jacqueminot will make shoots 8 feet to 10 feet long in one season. If these are bent over, an immense crop of flowers can be taken, afterwards cutting back hard. The plants will then make another lot of long shoots, which will be well ripened during the summer for another season's crop. If possible, a selection for site of house should be upon a well-drained meadow. Trench land about 2 feet 6 inches deep, putting all turf at the bottom, grass downwards, a good proportion

of half-inch bones or bone-meal and some well decayed cow manure. Trenching is best done several weeks before we want to plant out. Pot plants would be best, but plants from open ground would do, especially if lights were movable and we could grow the plants almost naturally the first year. Climbing Roses planted out under glass are best run horizontally the first year. I will give my idea of growing Maréchal Niel. I would select a good young maiden standard. Plant it in early autumn, cut back growths right down to the base of shoots, leaving about one eye on each of two shoots. As they grow, train these young growths to wires right and left of the plant. Of course, good heat must be maintained and

#### BOOKS.

##### THE YEW TREES OF GREAT BRITAIN.\*

THE noble Yew well deserves a book to itself which could be in the hands of everybody interested in our native trees, and it is fortunate in having a biographer who was equal to the task he set himself to perform. We have no hesitation in saying that Dr. Lowe has given us a book worthy of the subject. He has taken great pains to see and measure for himself where possible a great number of the finest trees in many parts of the country, and of those



The Abyssinian Spurge (*Euphorbia abyssinica*) at La Mortola. (See p. 97.)

plenty of moisture in the atmosphere. If the plant is in good soil as described above, wondrous shoots will be made by the fall. The growths should be well ripened in the autumn. The next season these two long shoots will give some good Roses, and after flowering, growths can be taken at intervals along the main shoot and trained perpendicularly up the roof. The next season these growths will give an abundance of good Roses of wondrous colour if well fed. After flowering gradually cut back growths to main arms again to encourage more young growths for the next season's flowering. Most climbers of vigorous habit are best flowered upon this system.

PHILOMEL.

he has been unable to examine personally he is enabled to give adequate data by corresponding with people more favourably situated. His researches included all trees in the United Kingdom of 10 feet girth and upwards. Of the trees 30 feet in girth and upwards, three are in Worcestershire, four in Sussex, one in Surrey, two in Shropshire, five in Monmouthshire, one in Middlesex, three in Kent, four in Hants, one in Gloucestershire, two in Derbyshire, one in Devon, two in Dorset, two in Carnarvon and

\* "The Yew Trees of Great Britain and Ireland." By Dr. John Lowe. London: Macmillan and Co.

one in Berks. These should be sufficient to give all the information which is necessary for the practical purpose of awakening in gardeners, planters and amateurs, the interest which the subject of this little book deserves. In introducing his book the author observes:—

There is no English tree which has gathered round itself so much of historic, poetic and legendary lore as the Yew; none is so closely associated, directly or indirectly, with events, persons and buildings which are famous in our national history. In early and mediæval times it was the source of our country's greatness and supremacy by supplying the bows and arrows with which our great victories were won; but, in spite of this, it has never attained that love and veneration in the popular mind so lavishly bestowed on its rival the Oak.

Apart from sentimental and historical considerations, too much can hardly be said to recommend the Yew tree as a garden tree. Its fine effect if intelligently planted, its unrivalled merit as an evergreen tree, preserving its beautiful soft tones in the hardest winters, and its value for shelter and as a screen from cutting winds are qualities which were recognised in old days perhaps more than in the present, although our forefathers subjected it to a good deal of indignity by cutting it into fantastic shapes, a fashion which prevailed for several centuries, despite the voice of common sense which occasionally made itself heard in the land. Thus Lord Bacon wrote:—

I, for my part, do not like images cut out in Juniper and other garden stuff; they be for children.

Pope and Addison also ridiculed the practice of turning trees into birds and beasts, and still more ignoble objects. No doubt there is a certain charm in lines of clipped Yew hedges and old avenues forming soft green backgrounds for brighter things, and we are inclined to agree with Dr. Lowe, that many old-fashioned gardens have suffered in losing the quaint forms of cropped Yews. From its association with churchyards, the Yew no doubt came to be looked upon as a melancholy sort of tree, which wanted the quickening touch of the gardener's shears to make it presentable. The hand of man placed it in the churchyard; its natural abiding place was not so much in low ground as in rugged scars and clefts on the sides of hills. In her charming book, "The Pilgrim's Way from Winchester to Canterbury," Julia Cartwright (Mrs. Ady) writes:—

Once more upon the hills, we can follow the lines of Yews which are seen at intervals along the ridge from Saint Martha's Chapel, by Weston Wood, and the back of Albury Park, turning a few steps out of our paths to visit Newland's Corner, one of the most beautiful spots in the whole of Surrey.

Many of our readers must know this spot, which is not far from Guildford. The ancient Yew grove there is mentioned in Domesday Book. It goes without saying that individual Yew trees are often of great antiquity, but many erroneous views obtain on this head. There have been various modes suggested of estimating age, right and wrong. De Candolle's come under the latter category. He assumed that the tree's growth took place by a regular deposition of concentric layers. This, as Dr. Lowe points out, is true in the case of the young trees, but, as with other created beings (not to particularise), after a certain stage in life is reached the means of ascertaining age become more a matter of conjecture.

It has been questioned whether some trees may not produce more than one ring in a year. In this country it is certain that only one annual

ring can be produced in young trees, but then it seldom happens that a Yew exceeds 200 years without having the main stem injured by storms or disease, and it is impossible beyond this period to depend upon the number of rings as a test of age.

Up to 200 years and a little over in uninjured trees the number of annual rings may be taken to represent the age. Estimating the age of trees by measuring their growths and comparing them with those of trees of known age is another way, but not always accurate, as the rate of increase varies considerably according to locality, climate, and soil. The late Sir R. Christison thought a foot in seventy-five years was about the average rate of growth, but many English trees far exceed this. A third way is by measurement of increased girth at a fixed point and at stated periods, a method which gives a ratio of 1 foot of diameter in about fifty-six years—a much higher rate than that arrived at by Sir R. Christison. The author has no faith in the *trephine*, or trepan, as a means of computing the age of Yews, and his doubts will be found at p. 57. Traditional accounts again are not always to be trusted, owing to the natural human tendency to exaggerate age in certain objects. Thus the Abercairny tree in Perthshire, which is said at one time to have sheltered the Marquis of Montrose (1640), is 10 feet 7 inches in girth at 5 feet from the ground, and is probably not much over 200 years old. Another fallacious method, again the discovery of De Candolle, is to ascribe to a tree the age of an adjacent building. The author gives several conspicuous examples of its absurdity.

There is an instructive chapter on the causes of variation in growth, overcrowding, pollarding, and insect foes. From the attacks of insects the Yew tree, owing to its poisonous nature, appears to be singularly free; the vulnerable spot is the points of the young shoots, and these in certain localities are often attacked by a gall-fly, which, by inserting its eggs in them, arrests their growth, the leaves being developed in the form of a cone.

To account for the practice of planting Yews in churchyards several reasons are given. One ascribes it to Druidical custom; another to the fact that branches of it were often carried in procession on Palm Sunday in lieu of Palms. Yew trees in churchyards in East Kent, and also in Ireland, are even now called Palms. Ablett says the branches were carried over the dead by mourners and thrown beneath the coffin in the grave as a type of immortality. A more cogent reason than any, the author thinks, was the necessity of providing a supply of bow staves for our bowmen in old days before the "clothyard shaft" was finally elbowed out by the "villainous saltpetre." The Yews of our churchyards would then be the few that survived the severe cutting to which Yews were subjected in old times. Even in Elizabeth's reign

the Yew had become so scarce. . . . that bowyers were directed to have four bows of Witch Hazel or Elm to one of Yew, and no person under seventeen, unless possessed of movables worth forty marks, or the son of parents having an estate of ten pounds per annum, might shoot "on a Yew bow."

However, the author is careful to state that, according to Giraldus, the practice of planting Yews in churchyards was common long before "Yew bows" were in general use.

The etymology of the word Yew is variously ascribed. According to Dr. Johnson it is derived from the original Anglo-Saxon, or from the Welsh *yw*; Dr. Price from the Latin *Iva*,

which also signifies the Ivy. According to Mr. J. G. Cumming, Yew is ancient British for existent and enduring, having the same root as Jehovah; and Yew in Welsh means "it is." An ingenious inquirer in "Notes and Queries" (1887) suggested "view," and quoted several instances of the trees being called "view" trees; but, as Dr. Lowe points out, this was probably a mistake due to the interchangeable use of the letters *y* and *v*, which sometimes occurs in old writings and speech, and which still obtains in Norfolk, "where it is not uncommon to speak of the Vine of the Grape wine, meaning the wine of the Grape Vine."

Poetical allusions to the Yew are, of course, frequent. Thus Chaucer:—

With many high lorer and pyu  
Was renged clean all that gardyn  
With Cipres and with Oliveres,  
Of which that nigh no plente here is  
There were Elmes grete and strong,  
Maples, Asshe, Ook, Asp, Planes longe,  
Fyn Ew, Popler and Lindes faire,  
And other trees full many a payre.

Spenser, also, in the *Faerie Queene*:—

The Firre that weepeth still,  
The Willow worne of forlorne paramours,  
The Eugh obedient to the bender's will.

In more warlike strain, Michael Drayton (*Ballad of Agincourt*):

With Spanish Yew so strong,  
Arrows a cloth-yard long,  
That like to serpents stung,  
Piercing the weather.

Shakespeare often introduces the Yew in incantations and in passages full of melancholy and forebodings. In one place he speaks of it as "double fatal," in allusion, doubtless, to the poisonous nature of the tree. Thus (*King Richard II.*, act iii.):—

Thy very beadsmen learn to bend their bows,  
Of double-fatal Yew against thy state.

Poetical allusions to the Yew might be instanced almost *ad infinitum*, but the following one from Wordsworth's poem, *Yew Trees*, is perhaps the most graphic, and with it we bring our selections from Dr. Lowe's list to a close. After telling us that

There is a Yew tree, pride of Lorton Vale,  
he continues:

But worthier still of note  
Are those fraternal four of Borrodale,  
Joined in one solemn and capacious grove.  
Huge trunks! and each particular trunk a  
growth  
Of intertwined fibres serpentine,  
Up-coiling and inveterately convolved,  
Nor uninformed with phantasy, and looks  
That threaten the profane: a pillared shade,  
Upon whose grassless floor of red-brown hue,  
By sheddings from the pining umbrage tinged  
Perennially—beneath whose sable roof  
Of boughs, as if for festal purpose, decked  
With unreforming berries—ghostly shapes  
May meet at noontide.

The poisonous properties of the Yew are now well established, only the "sweet mucilaginous cup" surrounding the seed is quite harmless. It is doubtful whether birds even eat more than a certain quantity, if at all, of the seeds, although the latter are less poisonous than the leaves. It is on record that 800 grammes of the seeds administered to a fasting horse produced no ill-results. The wood and bark are less poisonous than the leaves, as is the highly noxious qualities of which all authorities agree.

"The Yew Trees of Great Britain and Ireland" ought to find a place in the library of every country house as a work of reference. It is well printed and is full of illustrations.

## STOVE AND GREENHOUSE.

## LILY OF THE VALLEY FORCING.\*

OF the thousand and one plants which readily submit to be forced into flower out of their ordinary season it may be doubted if there is one having anything like the universal popularity which the Lily of the Valley enjoys. Half a century ago clumps of Lilies were grown in Berlin and Hamburg in a small way to get a few blooms for Christmas and new year. By 1856 between twenty and thirty nurserymen in and around Berlin had taken up the cultivation, but in all cases only on a small scale. In 1859-60 the largest quantity of flowering crowns that any one nurseryman produced annually was 60,000; but this gradually increased, until in 1870 seventy-two acres of Lilies were under cultivation outside the city of Berlin. At the

owing to the nature of the soil, they are kept growing too long, and do not ripen off early enough. The ground must be deeply dug and well broken at the same time, working in plenty of old hotbed manure, linings, rotten leaves, &c., all well decomposed and crumbled to pieces. This work should be done in the autumn in dry weather, in order to be ready for planting as soon as crowns can be obtained. I greatly prefer autumn planting, considering that the sooner the crowns are in the ground the better. Nothing is more injurious to the roots of Lilies than exposure to sun and wind. I have been compelled sometimes to plant in March in drying east winds with bright sunshine, when it has been impossible to get the roots covered quickly enough to prevent their getting dry, and the consequences have been disastrous. The ground having been prepared, the best and quickest method of planting is in rows 7 or 8 inches apart, the plants being about 1 inch apart

summer. Thus when they are fit to lift as flowering crowns their actual age is three and a half years. It is true that by good cultivation many of these crowns will bloom in two years from the time of planting, and many growers have been tempted to lift them at that age; but experience has taught me that the percentage of flowering crowns is smaller and the increase of planting crowns less than when they are left a year longer undisturbed. It is generally understood that Lilies of the Valley must be three years old before they bloom, and they will then flower every alternate year. This is the rule, but there are exceptions. By good cultivation, *i.e.*, high feeding at the proper time with liquid manure, and if special care is taken to remove the flower as soon as ever it is open, by pulling its stalk right out of the crown, such crowns will bloom several years in succession; and hence it is obvious that Lily crowns can be



A group of Agaves, Aloes and Yuccas in the garden at La Mortola. From a photograph sent by Mr. Hanbury. (See p. 97.)

present moment there are on the Continent and in England many thousands of acres devoted solely to the production of Lily of the Valley crowns. In order to be successful in forcing Lilies of the Valley, the

## CULTURE OF THE CROWNS

demand the first consideration. I have seen Lilies grow in almost every kind of soil and situation, doing better in some than in others; but experience has taught me that the best soil for growing crowns for forcing is a light sandy loam with a damp subsoil, and the best situation is an open one to the south and west, sheltered, if possible, from the east and north. In cold and heavy clay land they will not do well; they will grow, and sometimes produce very strong crowns, with but few fibrous roots; but such crowns are not fit for early forcing, as,

\* Paper read by Mr. T. Jannoch before the Royal Horticultural Society, August 25, 1896.

in the rows: paths of 15 to 18 inches wide may be left between every eight rows for the convenience of weeding. In planting, which is done by throwing out trenches about 5 inches deep, take care that the crowns are not set too deep; they should be only just deep enough for the tips of the crowns to be level with the surface of the ground. A good mulching of cow manure, or, if this cannot be had, well-rotted stable manure, completes the work, and nothing further is required but keeping the beds free from weeds and giving them plenty of water in dry weather during the summer. If one-year-old crowns have been selected for the start, they will require three seasons of growth before being fit to be lifted for forcing. It must not be supposed that so-called one-year-old crowns are actually twelve months old: they really represent only four to five months' growth, the rhizomes beginning to grow in June or July, forming the crown under ground during the

made to bloom twice within twelve months, *viz.*, once at their natural time in May, and again taken up the following autumn and forced into bloom before January.

## FORCING.

To force Lily of the Valley successfully it is of the utmost importance to have well-ripened and well-matured crowns that have fully completed their growth and are perfectly at rest. Before they have undergone a period of rest, be it ever so short, you cannot force them, no matter what amount of heat you may give them. Much also depends on where and how the crowns have been grown. The best are undoubtedly those that have been grown in light sandy soil, heavily manured and well exposed to the sun, as they will complete their growth and go sooner to rest than those grown in heavy soil and shady places. Forcing may commence about the end of October or beginning of

November; the methods adopted are various, but for early flowers, in November and December, a close propagating or forcing pit is absolutely necessary in order to maintain a moist and even temperature. If pots are used, plant about twelve crowns in a 5-inch pot in the following manner: Place four crowns in the palm of your left hand, then a layer of soil on the roots, again four crowns and more soil, and then the remaining four crowns, keeping the crowns all level; close your hand and drop the whole into a 5-inch pot, working the soil well in between each crown, so as to have them equally divided and all crowns standing level just above the brim of the pot. Give them a good watering, and plunge the pots in a bed of either Moss or cocoa-nut fibre; cover lightly with 2 inches or 3 inches of clean Moss, and close the bed with boards to keep it perfectly dark. Bring the bottom-heat up to 80° Fahrenheit at once, and gradually increase to 95° within a fortnight, maintaining a regular and even temperature the while. Never allow the thermometer to rise above 100° or to fall lower than 80°, or much harm will be done. Examine the pots daily, keep a moist atmosphere, and water (when necessary) with water of exactly the same temperature as the bottom-heat in which they are plunged. When the crowns start into growth and are about 2 inches high, remove the top covering of Moss and gradually inure them to the light, still, of course, maintaining a high temperature. As soon as the bottom bells begin to open remove to a cooler temperature and discontinue syringing overhead, as moisture hanging on the blooms is apt to spot the bells. Another method, more usually adopted, and which saves much labour and room, is to plant the crowns an inch apart in boxes of a convenient size and treat as above. Still another plan, but one not often practised now, is to plant the crowns in forcing beds thickly together, and when they have grown 2 inches or 3 inches to transplant them into pots. It may be here mentioned that actual flowering can be retarded, when so desired, by the boxes in which the crowns are forced being removed from the forcing house into a cooler one of genial temperature. The heat, however, must be always even and not too low, or else the damp will speedily ruin the flowers. The foregoing methods refer principally to the early period, before Christmas; later in the season, and as the spring advances, forcing is an easier matter. The temperature need not be kept so regular, and all that is required is warmth and moisture, which will soon start the crowns into growth. More attention should at this later time be paid to the hardening off, shading from bright sunshine, and never allowing them to get dry at the roots; they should also have more room by planting the crowns wider apart, as more leaves will now appear than before Christmas. Finally, it should be pointed out that if temporary frames are placed over the beds of flowering crowns out of doors in March their blooming will be hastened by two or three weeks. For this purpose keeping them close and watering as required are the only necessary directions. It is quite immaterial in what soil the crowns are planted for forcing, as absolutely no new roots are formed during this period; anything, in fact, which retains moisture will do. You cannot improve the blooms by planting the crowns in the very best of soil or by giving them manure water. All the nutriment required for the development of the flowers is gathered during the previous growing season and is stored up in the roots. It is not generally known that forced Lilies will bear almost any rough treatment. They can be pulled out of their boxes or pots

when in full bloom for making up into fancy stands, ornamental pots, and nicknacks of any description without flagging or spoiling. They can be sent by post or rail hundreds of miles packed in a little damp Moss, when they may be again planted and will look as fresh as if they had never been disturbed. I once sent a quantity in an hermetically-sealed box to Pietermaritzburg, where they arrived after their long ocean and land journey as fresh as if they had only travelled a few miles. As regards the

## VARIETIES

best adapted for forcing, that known as the Berlin is unquestionably the best for early work. The Dutch and Hamburg ones are good for late forcing, but my experience is that they do not approach the Berlin strain for forcing before Christmas. These three varieties are said to be seedlings, or possibly "sports," from the common or wild Lily of the Valley, on which they are immense improvements. No amount of cultivation would ever transform the wild plant into a rival of either the Hamburg, the Berlin, or the Dutch forms. The Dutch variety is of more spindly growth than the Berlin, and has, moreover, a weak and drawn appearance.

Retarding Lily of the Valley crowns is now done both extensively and successfully. The movement, however, is still in quite its infancy.

**Lindenia rivalis.**—This is a pretty stove or warm greenhouse shrubby plant, bearing long tubular white flowers so freely that it seems to be nearly always in bloom. The tube is 4 inches or 5 inches in length, pure white at the mouth, reddish below, the evergreen leaves about 3 inches long. It does well in a moist stove heat, and a nice plant is in bloom at Chelsea in the Ixora house. It is a native of Mexico, and was introduced in 1856.

**Ericas at Clapton.**—Although but few of the Ericas are now in flower, a look at the plants at Messrs. Hugh Low and Co.'s nursery was very interesting. Thousands of plants in great variety and all sizes are to be seen, each one a model of good culture, and not one in a thousand showing as much as a brown leaf. The majority are stood outside in the full sun, and so arranged that while not crowding each other the foliage of each makes a little shade to the pot next to it. *E. hymalis* seems here, as everywhere, a great favourite, there being apparently tens of thousands of it. The only species I noticed in bloom was the bright and showy *E. cerinthoides coronata*. This too is very largely grown, and one can easily imagine that it meets with a ready sale, the bright scarlet blossoms having a really fine effect upon the dark green foliage.—R.

**Zephyranthes carinata.**—Given the same treatment as *Vallota purpurea*, this *Zephyranthes* forms an extremely attractive object in the greenhouse during the month of July and sometimes well on into August. The bulbs of this are small, not much larger than a good-sized Snow-drop, and the grass-like leaves, though 8 inches or 9 inches long, are arranged in a spreading manner, and consequently do not rise very far above the soil. The flowers, which are borne on stems usually less than a foot high, are a great deal like those of the *Vallota*, but of a beautiful rich deep rose shade. Each flower is borne singly on a stem, but, as the bulbs increase quickly, they soon form a mass or clump, and a succession of blossoms is in this way maintained for some time. As so many bulbous plants come from South Africa and this *Zephyranthes* bears such a great general resemblance to *Vallota purpurea*, it is often assumed to be a native of the Cape region, instead of which it hails from Mexico, from whence it was introduced in 1824. It succeeds well in an ordinary greenhouse, or even in a cold frame from which frost is just excluded.

About half a dozen bulbs in a pot 5 inches in diameter will form an effective little clump, or larger masses can be arranged in the same way. The soil employed should be principally sandy loam, such as will remain in good condition for years, as this *Zephyranthes*, like many other bulbous plants, is most satisfactory when allowed to remain undisturbed at the roots. A second species, *Z. candida*, is hardy in a sheltered position, but to ensure a display of bloom it must be in a sunny spot. The flowers of this, which are white and not unlike those of a *Crocus*, are borne in great profusion towards the end of August or even later.—H. P.

**The Oleander.**—Among the many classes of plants whose merits are totally overlooked at the present day must be included the Oleander, of which there are several varieties in cultivation, but, except occasionally in some old-fashioned garden, none of them are ever met with; and though to a limited extent kept in stock by a few of our nurserymen, there is really no demand whatever for them. Notwithstanding this, the Oleander is a really beautiful shrub, that will flower year after year with but little attention. Grown in pots or tubs, it may be wintered in the greenhouse or conservatory, and during the summer can be placed out of doors in a sunny spot. Such conditions are favourable to the production of blossoms, which expand about July, the plant then being particularly attractive. When in flower they may be allowed to remain out of doors or removed to the conservatory if they are needed at that period. A loose, open-growing shrub it naturally is, and any attempt to alter its character in this respect will only end in failure. If a specimen is cut back, at least one year's crop of blossom will be sacrificed. The cultural requirements of the Oleander are in no way exacting, for cuttings strike root very readily either in soil, sand or water if they are kept close for a little while, and they grow away freely in any ordinary potting compost. In commencing with young plants, the tendency to run up tall and naked should be particularly borne in mind, and to obviate this they must be freely stopped during their earlier stages, as in this way the foundation of an effective specimen is laid.—T.

## LILIUM ALEXANDRÆ.

It is now four years since this beautiful and distinct Lily made its appearance in this country, and it was shown in such grand condition on July 11, 1893, that a first-class certificate was bestowed upon it. Since then it has been seen but little till the present year, in the early part of which some importations were disposed of in the London sale rooms, and it is probable that some at least of the many examples that I have met with recently were obtained in this way. Its comparatively dwarf habit is to many a great recommendation, for numerous examples have come under my notice this season not more than 18 inches high, yet each plant was carrying three or four of its massive blossoms. When first public attention was directed towards this Lily, it was stated to be a hybrid between *L. longiflorum* and *L. speciosum*, but when in flower, *L. auratum* and *L. longiflorum* were suggested as the probable parents. This latter view I am inclined to favour, for it is in many ways about intermediate between these two last-named species. Firstly, the bulb, which is of a yellowish white colour, would almost pass for that of *L. longiflorum*, though there is somewhat of the auratum appearance about it, but no trace whatever of *L. speciosum*. The flowers, again, are shorter than the Japanese forms of *L. longiflorum* and more tubular than those of *L. auratum*, while the anthers are not invariably of a brown tint, as in a few instances I have seen them nearly as yellow as those of *L. longiflorum*. The fragrance, too, suggests a nearer affinity to this last-named than to either *L. speciosum* or *L. auratum*.

There is a certain amount of difference to be found among the individual plants of *L. Alexandræ*, as, apart from the anthers just noted,

some flowers are longer than others, while the segments reflex differently and foliage distinctions may also be noticed. This Lily was at first known as *L. Uke-uri*, but it is now generally known as *L. Alexandre*. Whether an artificial or a natural hybrid, a considerable amount of confusion seems to prevail with regard to its origin, but in any case it occurs in an apparently wild state on Uke Island, the name *Uke-uri* signifying the Uke Island Lily. The bulbs are not large, being about the size of those of an average sample of *L. longiflorum*, and such as these will produce three or four fine blossoms. It is a particularly desirable Lily to grow in pots for the decoration of the greenhouse or conservatory, as it does not run up tall and weak under glass, added to which it is not too strongly scented, while the massive wax-like petals retain their freshness for a longer period than many other Lilies. Like *L. longiflorum*, it starts into growth early in the year, and though Japanese importations sometimes reach here as late as March in good condition, yet in purchasing dormant bulbs at that season they should be carefully examined to see whether they have suffered in any way by being kept out of the ground so long. T.

#### SHORT NOTES.—STOVE & GREENHOUSE.

**Primula obconica.**—On a recent visit to Sandhurst Lodge, Wokingham, I noted a batch of *Primula obconica* of a good rose colour, and, as far as I could see, the strain was fixed. The plants showed they had given an enormous amount of bloom. It is a great advance on the *grandiflora* type in colour.—J. C.

**Browallia speciosa major in pots**—"H. P." at page 65 speaks in high terms of this plant. I quite agree with all he says as to its value as a pot plant for house embellishment. Recently I saw some grand pots of this *Browallia* at Sandhurst Lodge. These were growing in 5-inch and 6-inch pots, nice bushy plants full of bloom.—JOHN CROOK.

**Achimenes at Sandhurst Lodge.**—The *Achimenes* is a great favourite here. The plants are grown in 5-inch and 6-inch pots. As I liked these with their numerous shades of colour I regretted they are not more often seen. The following are a few of the best kinds: *Coccinea*, flowers very bright, but small; *Carl Walporth*, *Dazzle*, *Meteor*, *Ambroise Verschaffelt*, *Longiflora major*, *Sir Treherne Thomas*, and *Rose Queen*. This last is amongst the most useful, as it needs no stakes when well grown.—J. C.

**Aristolochia gigas.**—In a warm house against a back wall at Sandhurst Lodge I noticed a nice healthy plant of *Aristolochia gigas*. It had three large blooms open. At another end of the house in a narrow border *Begonia corallina* was planted and trained over the roof. It was in full bloom, and as the blooms hung down with their long foot-tendrils they were very effective. This is a strong-growing kind, and just adapted for planting out to cover walls and roof trellises, &c. It is a continuous blooming kind, and should be more often seen.—J. CROOK.

## ORCHIDS.

### BURLINGTONIA CANDIDA.

As an easily grown and free-flowering species this *Burlingtonia* would be hard to beat among the smaller-flowered Orchids. The habit is dwarf, the pseudo-bulbs flattened, bearing stiff, dark shining green leaves. The flowers occur on arching or semi-erect racemes that spring from the base of the pseudo-bulbs between the sheathing foliage and are of the purest glistening white, with a stain of golden yellow on the lip. The flowers appear at various times during the spring and summer, and if not kept too hot or damped with the syringe, last a long time in good condition. Being a dwarf plant, the amount of room it takes up is little; indeed, in a well-flowered medium-sized specimen one can hardly see the leaves, the flower-spikes almost hiding them. Such plants have a very pretty effect suspended from the roof in wooden

baskets, and owing to the amount of air and light they get in such positions they are usually satisfactory. The latter points are perhaps the most important in its culture, for the plant grows naturally upon the highest trees. With regard to compost, an ordinary peat and Moss mixture kept open suits it well, but it is a difficult plant to keep at home. The roots are very freely produced, and many are pushed almost erect, so that it is impossible to bury all of them. But as long as the base of the new growth is resting on the compost they will take no harm, as a fair number are sure to enter it. To let it ramble away at will, on the other hand, is to court failure, for valuable as air roots are as accessories to those in the compost, they are not to be depended upon. No harm comes from cutting partly through the rhizome and bending this round to bring the pseudo-bulb nearer the centre of the plant, or to cover a bare place in a large specimen, but avoid breaking it more than necessary. Pans or pots may also be used for growing it in, and the temperature of the *Cattleya* house or even of the East India house is not too high for them when growing. During this time give a very free supply of water, but when at rest this may be sensibly diminished, not altogether withheld, as this would cause the growths to be weak in spring, but much less than when growing freely. Its worst insect enemy is a small white scale that is very difficult to thoroughly eradicate, though it may be kept in check by timely sponging and frequent light syringings overhead when growing. Its stronghold is in the sheathing bases of the leaves, and these should have attention when cleaning. This *Burlingtonia* comes from Demerara, whence it was introduced in 1834.

**Gongora Loddigesi.**—This species is now in flower with Messrs. Veitch. It grows and blooms after the manner of *G. atro-purpurea*, but the pseudo-bulbs are more conical and less ribbed. The leaves are stiff, deep green, and each about 6 inches in length. The spikes carry from nine to a dozen flowers on each. The colour is a pale sepia-brown, with overlying tints of a deeper hue, the segments being almost transparent in appearance. The plant is carrying five fine spikes.

**Odontoglossum cristatellum.**—Whether or not this is distinct enough to warrant specific rank is a question; it is certainly distinct as a garden plant. The sepals and petals are yellow, but the ground colour is nearly hidden by the large brownish-purple blotches. The lip is yellow, brown at the point, much crested, the blossoms being very sweetly scented. It does well in a cool, moist house the whole year. Though introduced nearly twenty years ago, this plant is still not common, and it makes a nice feature in the cool house just now.

**Cypripedium Clinkaberryanum.**—This is a very handsome *Cypripedium* raised from *C. Roebelinii* and *C. Curtisi*. A fine plant is now in flower at Messrs. Veitch and Sons' nursery. The scape is tall, reddish, and hairy, the dorsal sepal having lines of purple upon a whitish ground; the lower sepal is paler in its markings and greenish. The petals are long and drooping, so closely coloured with crimson-purple that the white ground is hardly seen. *C. Clinkaberryanum* was raised by Messrs. Pitcher and Manda.

**Oncidium phymatochilum.**—This is in first-rate order at Messrs. Veitch's, the spikes carrying an immense number of flowers and having a remarkably fine effect. They grow erect, but the crowds of blossom hang around very gracefully. The sepals and petals are yellowish green, with a few reddish spots, and the lip is white on the front lobe, yellow at the sides. The flowers last a long time in good condition. It is not a difficult plant to grow, thriving in medium-sized, well-drained pots of peat and Moss in the *Cat-*

*tleya* house. It is a native of Brazil and was introduced in 1843.

**Dendrobium d'Albertisi.**—The singular habit and blossoms of this plant should make it a favourite were it better known. A fine plant in bloom at Messrs. Hugh Low and Co.'s nursery is carrying several spikes of bloom. The petals grow erect, are pure white at the base, becoming green at the tips. The lip is lined with purple and the sepals are pure white. The flowers are very lasting, and the plant being a native of New Guinea requires abundant heat and moisture while making its growth.

**Disa grandiflora.**—This is bright and effective in many collections just now, and may be seen in variety at Mr. Bull's, a pretty contrast with the typical form being *D. grandiflora Barrelli*, a variety introduced by him from the Cape. In place of the usual crimson tint the outer segments are orange-scarlet, the lip being much paler than that of the typical form. Both are beautiful cool house kinds if well done, requiring to be potted in a nice open description of compost in thoroughly drained pots or pans. Plenty of water at the root and abundance of air are needed all the year round.

**Odontoglossum læve.**—This comes from a correspondent for a name. It is a useful plant, strong growing and free blooming, and the flowers much resemble those of a *Miltonia* in the smooth, almost crestless lip. It comes from Mexico, whence it was sent to Chiswick in 1841 by Mr. G. Ure-Skinner. It does with rather more compost than the cool *Odontoglossum* generally, being very free rooting when in good condition. It should be grown near a ventilator and in a light position, this ripening it well and making it very free blooming. The flowers last a long time and are at first sweetly scented.

**Epidendrum Brassavola.**—As indicated by the specific name, the flowers of this plant bear a considerable resemblance to those of a *Brassavola*. They are produced from the apex of the pseudo bulb upon a tall erect scape, and are each upward of 4 inches across. The sepals and petals are rich brownish yellow, the narrowly heart-shaped lip being rosy-purple in front, yellowish white with deeper lines at the base. It makes a handsome specimen when well grown, a very fine piece being now in flower in Mr. Bull's nursery at Chelsea. It is by no means a difficult plant to grow, thriving well at the coolest end of the *Cattleya* house and needing plenty of water while growing.

**Cycnoches chlorochilon.**—This I have noted in several collections this week, the varieties differing a little in size and colour. The best form I have seen is at Messrs. Veitch's, the flowers being very large and the colour almost a golden yellow on the broad segments. As usual when the individual blooms are large but few are produced, the longer spikes having always smaller flowers. *C. chlorochilon* likes a good substantial compost, a fair quantity of good sound loam being of assistance. It may be grown in baskets or pots, these being well drained and clean. Plenty of heat and moisture is necessary all through the growing season, but during the winter the plants must be kept on the dry side.—R.

**Cœlogyne Sanderiana.**—This species was introduced about ten years ago by Messrs. Sander and Co., but does not appear to be very popular. It is a fairly large grower, the blossoms appearing now from the side of the oval pseudo-bulbs. Each bears five or six flowers, whitish on the sepals and petals, the lip pure white, with a yellow centre and lines of reddish brown. The foliage is bold and striking, and when in good condition it is one of the most beautiful species in cultivation. Being a native of some of the islands about Java close to the Equator, it likes more heat than the majority of *Cœlogynes*, and a shady moist house suits it best.

**Cattleya gigas.**—Among a large number of plants of this fine species noted during the last few weeks at the principal nurseries there is considerable variety. *C. g. Regina* is a magnificent

flower, the beautiful lip well shown owing to the flexed outer segments. It is like *imperialis* in shape, but more deeply tinted, while in *C. g. marginata* a distinct margin of rosy-white surrounds the deeper tint of the lip. *C. g. Sanderiana* is another fine and better-known form, a rather fancifully named one I came across being called *aurea* owing to a more widely distributed blotch of yellow than usual. The species generally is in capital form this season, and each year it seems to increase in favour.

## NOTES OF THE WEEK.

**Sedum maximum purpureum** is now conspicuous among its tribe by reason of its dark purple leaves and tall growth. In the latter respect it is nearly as vigorous as *S. spectabile*, and the two by association could be made very effective in the rock garden or border.

**Rosa rugosa**.—Two plants of this are just now producing very fine large fruits. I have read somewhere that they are edible and make a good preserve. I should be glad to know if any of your readers have tried them and found them good and wholesome.—EUSTACE F. CLARK.

**Delphinium Willdenowii**.—This is one of the choicest of the single kinds, and produces fine handsome spikes of clear bright blue flowers, the latter of a shade akin to those of the lovely *D. Belladonna*. The flowers are of a lustrous shining blue, a shade of colour that tells well in the garden.

**Ita virginiana** is a compact bush bearing numerous spikes of white blossoms very freely even on quite small plants. The plant when in good condition will reach from 4 feet to 6 feet high, flowering abundantly. It is quite hardy and deciduous, growing best in a bed of peat and sandy loam.

**Monarda didyma**.—Apart from the pleasing aroma arising from its leaves under friction, this produces abundantly fine heads of scarlet flowers that are a long time conspicuous in the garden. The plant is of the easiest culture, growing and flowering freely in any garden soil. The above is perhaps the best of all this group.

**Anthericum graminifolium**.—This has a beauty of its own in the border or even on the margins of sloping grassy banks. In any of these positions the profusion of its graceful spikes is very pretty, with their succession of pure white, though small blossoms. The plant does well in quite ordinary soil if the latter is fairly good.

**Carnation Edith Leadenham** is perhaps one of the finest pure white kinds in the border section of these flowers. Rather taller in habit of growth than many kinds is a good fault in the event of heavy storms that frequently mar the beauty of very pure flowers. It should make a very fine group, and is certainly an acquisition to choice whites.

**Lilium nepalense**.—This handsome Lily with yellow and black flowers was exhibited in fine condition at the Drill Hall a week ago by Messrs. Low and Co., of Clapton. The finely flowered plants were 6 feet or more high, and in company with the even more towering Trumpet Lily, *L. Wallichianum*, made a most imposing display.

**Hibiscus cœlestis** is a handsome form of this family, with large blossoms of deep mauve that are the more conspicuous from the fact of their having a base of crimson-purple. Such showy plants are worth cultivating freely, particularly in isolated groups on the grass, or the well-kept shrubbery could be made very showy by adding a few such things.

**Spiræa kamschatca** is perhaps one of the giants among herbaceous Spiræas, and though not showy, possesses an imposing appearance when towering several feet high. At the recent Drill Hall meeting Messrs. Paul and Son had examples of this. For marshy ground or the margin of the

lake it should prove of service. The examples in question were fully 7 feet high.

**Tritoma pauciflora**.—Though small and scarcely showy when compared with the giant inflorescences of this group in general, this plant is still interesting by reason of its pretty spikes of yellow cylindrically formed flowers. In a choice collection of rare plants this is worth growing, or in the rock garden, but it will scarcely impress one when seen only in solitary examples in the border.

**Heliopsis Pitcheriana**.—This handsome plant, exhibited by Messrs. Paul and Son recently at the Royal Horticultural show, and deservedly given the award of merit, should prove of considerable value in the garden. The blossoms, each 2 inches or 3 inches across, of the deepest golden orange, the ray florets firm, of good substance, are freely borne on a bushy, compact habit of growth.

**Michauxia campanuloides**.—This very peculiar plant, though curious and interesting, is certainly not the useful subject that may be expected from descriptions of the plant. Tall almost to ungainliness, it produces a thinly formed and branching inflorescence sometimes as high as 10 feet, but there is little beauty in the general habit or character of the plant, and still less of utility for the flower garden or border.

**Veratrum nigrum**.—Among fine-foliaged plants this is now conspicuous. The handsome foliage is quite exceptional in the garden, and when in early summer the pyramidal head of blossom appears it is quite a feature. For the wild garden the Veratrum are well suited and require but little care, being very hardy and vigorous. They require establishing in a deep soil before they flower well, when they attain some 5 feet or so in height.

**Eucryphia pinnatifida**.—The free-flowering examples of this plant that are occasionally shown by the Messrs. Veitch at the Drill Hall plainly show the plant to be under their care at least vigorous and free flowering; but to secure plenty of flowers on this plant, a deep, fairly rich soil and pure air appear almost if not quite essential. Well-flowered bushes of such things, however, are not common, and its cultivation may with advantage be considerably extended.

**Hunnemannia fumariæfolia**.—Among half-hardy annuals this member of the Poppy tribe is now very showy. Its distinct habit of growth and rather glaucous, triternate leaves make an excellent setting for the clear yellow blossoms, that are borne singly on the erect branching stems. The plant requires a good rich soil to attain perfection, and will grow to 2 feet high in such and flower profusely. Seeds should be sown about February, and the plants be grown on in frames till May.

**Campanula carpatica pelviformis**.—Among the members of this numerous family none are more distinct and worthy of general culture than this, which is said to be a selected seedling from *C. turbinata*. Instead of the well-known flowers of this latter, however, the above plant produces numerous large blossoms, deeply saucer-shaped in form, in rather lax panicles on freely branching stems, that are a foot or more high in established plants. The above should be found in every collection of good hardy plants, for it is certainly one of the best of its class, and both compact and free flowering. The blossoms, each about 2 inches across, are pale lilac.

**Flowers in Hants**.—The things look lovely and such pretty mixtures make themselves. There was a *Pyrus salicifolia*, silvery leaf, into which a yellow *Silphium* and a pink *Spiræa Nobleana* had twined. Then a brilliant red *Rose Campion* was peeping through a *Milkmaid Holly*. *Potentilla Rollissoni* is still in bloom. The double pink *Bramble* and yellow *Japanese Honeysuckle* in a large mass at my entrance gate are admired by the passers-by. *Lonicera grata* is lovely, and so is *L. gigantea*. *Chelone barbata antwerpensis* is magnificent. *Hedychium Gardnerianum* is

lovely, and *Melianthus major*, *Platycodon Mariæi* about as handsome as anything. I have a *Phytolacca* which seems better than *P. decandra*. *Asclepias cornuta* is nice coming up through shrubs. *Veratrum nigrum*, 8 feet high, is splendid.—M. A. ROBB, *Liphook*.

**Androsace lanuginosa** is now among the more freely flowered of alpinics in the rock garden. Generally speaking, it is not a plant that covers much space owing to the trailing manner of its growth, but where large plants exist or such as were pinched at the point earlier in the season, a more spreading habit will have been secured. Best of all, however, is to plant the cuttings, which root freely in sand, rather closely together in groups, so that they may grow and form one large, important group. It may not be generally known that by a system of pruning back the old stems to near the base each year a stronger growth is secured, and as a result larger heads of bloom; otherwise the rather elongated stems assume a straggling form, and not unfrequently the blossoms suffer in proportion. This method is suited to all the varieties of this kind. Seeds should also be carefully preserved, for this is an excellent mode of increasing these beautiful plants.

**Crinum Powelli album**.—Among bulbous plants and in these gardens where they are hardy with only a minimum of protection nothing can surpass this handsome kind. For the open garden, however, it should only be planted in the more sheltered positions, such, for example, as against a greenhouse or a south wall. At the present time at Kew are some of the handsomest flowering groups we have seen. These are all planted against the wall of the large Palm house at either side the entrance. The position of course is a most favoured one, yet it would be difficult to produce a finer group with the best culture in a greenhouse. Some of the flowering scapes were about 3 feet high, and bearing as many as eighteen flowers in an umbel. These are of the purest white and beautifully fragrant. Another handsome group is of hybrid origin, the result of crossing *C. Moorei* and *C. capense*. In this instance the stems were nearly 4 feet high, and the plants flowering freely made a really fine display of what in the open garden cannot be called an every-day occurrence.

**Campanula isophylla alba**.—Among hardy plants of a trailing or drooping habit this lovely form is almost, if not quite, unique; indeed, nothing that we know can compare with the abundance of its pure white blossoms produced on trailing stems upwards of 2 feet in length. Thus seen it is one mass of the purest white, and quite alone even in the much varied group to which it belongs. For the rock garden its trailing masses of bloom are indispensable, while for window boxes or hanging-baskets nothing can equal it. Two-year-old plants flower earlier and more abundantly than younger plants. The typical species, *C. isophylla*, seems a scarce plant, and one much more difficult to obtain true to name, even where hardy plants are a feature. The name is freely catalogued notwithstanding, but the plant usually supplied is more nearly related to *C. fragilis* than the above. The forms of *C. fragilis* are more procumbent in habit besides being distinct in leaf and other points. For the purpose here indicated the latter is also a much inferior plant.

**Pentstemon hybridum**.—The hybrid forms of this group that have originated from *P. gentianoides* and other species are now among the showiest plants in the garden, the flowers bright and varied. At the R.H.S. recently Sir Trevor Lawrence exhibited a fine assortment of these useful plants as cut flowers. These were a marked improvement upon the named varieties of a few years since. Indeed, it appears somewhat a waste of time, in a group so usually good, where a reliable strain obtains, to go to the trouble of naming at all, the more so when the merits of each entitle one and all to equal recognition. For the garden, however, they are invaluable, and as seed-

ings may be sown and brought into flower in something less than six months, it is scarcely worth while to purchase so-called named varieties, many of which are quite inferior, and decidedly less vigorous and free flowering than a large majority of seedlings of a good strain. Seed may be sown in January or February prior to planting in May; meanwhile the plants should be grown on quickly and at the same time as hardily as is consistent with discretion and good culture.

**Olearia Haasti.**—In many parts of the country, even towards the south, this New Zealand composite was badly cut back during the severe frosts of January and February, 1895. Now, however, it has quite recovered and is at the present time finely in flower, some of the bushes being completely covered with a sheet of white blossoms. It is a really valuable shrub and quite hardy in the home counties, except during winters like that just mentioned, which, happily, occur but seldom. It is of neat rounded habit, and its small Myrtle-like leaves are of a lustrous dark green above and silvery grey beneath. Without considering its beauty as a flowering shrub, it would be worth growing as a compact, dwarf, and slow-growing evergreen, interesting also as one of the comparatively few hardy composites of a woody nature. It bears its flowers in short corymbose clusters 2 inches or more across, the ray petals being few, but comparatively large and almost pure white. In New Zealand, where it is a native of the mountains of the Middle Island at altitudes of 4000 feet to 5000 feet, it grows ultimately into a small bushy tree. It was introduced by the Messrs. Veitch, of Exeter, in 1858.—B.

**Hemerocallis aurantiaca.**—Can any reader of THE GARDEN, speaking from experience, say whether a plant bearing the above name is in cultivation in gardens generally or otherwise, and where it may be obtained? I am not now referring to the handsome kind which is known by the name of major. Yet it is this very name that would lead one to suppose the existence of a typical species, and, indeed, such a plant has, I believe, been described some years since in a contemporary. Such a plant was doubtless described from living specimens, and yet the curious part is that no such plant appears to be known in nurseries. Under the circumstances, one may be right in inferring that only a small plant of the typical species existed, and in some way or other has never found its way into trade collections. That such a plant when once introduced could be lost entirely seems somewhat beyond reason in a group like the Day Lily, so characteristically vigorous. At the same time, there is the knowledge that such a plant existed years ago, sufficiently distinct, too, to be worthy specific rank, and yet unknown to our gardens. Years ago such a plant would have enriched the genera to which it belongs, but now the presence of the major variety in a measure precludes this. At the same time, any information as to the whereabouts of the type, its habitat, or introduction could not be without interest. Is it an overlooked plant in any botanic or private garden?—E. JENKINS.

**Cytisus nigricans.**—Among the later flowering Brooms—which, unfortunately, are not many in number—none deserve a wider cultivation than *C. nigricans*; not one of them certainly remains so long in bloom. Commencing to open its flowers during June, it is in full beauty through the entire month of July, and even now in August it has lost but little of its showiness. It bears long, erect spikes, which commence to flower at the bottom, and as the lower ones fade the upper ones keep opening, so that a single spike may bear fully-formed seed-pods, flowers and unexpanded buds simultaneously. Some of the longest spikes are 9 inches long, and the short-stalked flowers, which all point downwards, are of a clear bright yellow. The leaves are abundant, dark green, and consist of three obovate leaflets. The plants will attain from 3 feet to 6 feet in height if allowed to grow at will, but we find it best to keep them comparatively dwarf

by cutting the shoots that are now bearing flowers back to 2 inches next spring just as there are indications of renewed activity. They flower on the current season's growth, and the spikes are larger than on unpruned plants. There is a large hed in the arboretum at Kew that has been in flower for six weeks past. The species comes from the mountains of Central Europe, but although it has been in cultivation since 1730, it is not so often seen as its beauty, the length of time it flowers, and especially the season at which it is at its best would warrant.—B.

**Romneya Coulteri.**—About a year ago, during a visit to the extensive and very interesting nurseries of Messrs. Dickson, of Chester, I was much struck by the fine stock of this Californian Poppywort. It appears to thrive there outside in perfection, certainly better than I had seen it anywhere so far north, although in Devon and Cornwall it may be seen equally fine. When at its best it makes a really magnificent and striking shrub. One of the plants at Chester, if I remember rightly, was a spreading, loose-growing bush 6 feet or 7 feet high, and had borne several dozens of flowers open at one time. The species, however, is rare, and has never got a real foothold in English gardens. It is scarcely hardy in most parts of the country without winter protection, and when grown permanently under glass it grows lanky and does not flower freely—at least in my experience. Its stems are herbaceous and of a glaucous colour; the leaves also are glaucous, 3 inches to 5 inches long, deeply lobed, and have a few bristly hairs at the margins and on the stalks. The flower is very showy, being 6 inches across, with six pure white petals, beautifully crimped, surrounding a large spherical tuft of yellow stamens; it has a sweet and very pleasing odour. The species, which is the only one in the genus, was discovered by Dr. Coulter about fifty-three years ago in the San Diego County of California, where it occurs near the borders of streams. The generic name commemorates Dr. Romney Robinson, astronomer at Armagh in those days. Some small plants are in flower now at Kew.—B.

**Amorpha canescens.**—In the United States this little shrub is known as the Lead Plant, a name which it has obtained from the belief once held that its presence indicated the existence of lead in the soil. It bears but little resemblance superficially to the better-known *A. fruticosa*, being a dwarf shrub ranging from 2 feet to 4 feet high, and very distinct on account of the dull silvery hue of its foliage. The branches are erect, and except in mild winters die back to the ground each year; they are abundantly furnished with the finely pinnate leaves, and covered with a short soft pubescence. The flower-spikes are borne at the ends of the branches and in the axils of the leaves near, forming one large, compound raceme, which is 8 inches or more long and about half as much in diameter. The flowers are small, but very numerous, and the purplish-blue colour contrasts well with the grey and minutely divided foliage. The plant belongs to the leguminous family, but, as in all the *Amorphas*, the flower consists of the standard petal only; those parts of the corolla which in the papilionaceous section of the family are known as the keel and wings are altogether absent. The species has a wide distribution on the eastern side of North America, and extends from the region of the Red River in Canada to the Southern United States as far as Florida. It is not easy to propagate except by seeds, and in this country it flowers rather late for it to ripen them regularly every year, but during the last few hot seasons it has done so. It is naturally a deep rooting plant, and will stand drought better than most hardy shrubs.—B.

—The Messrs. Veitch showed this beautiful deciduous shrub in capital form at the last Drill Hall meeting of the Royal Horticultural Society. It is a very graceful plant, of 3 feet or 4 feet high usually, the frail twigs being freely covered with pinnate leaves, and producing numerous violet-coloured Heath-like blossoms in rather dense picate racemes.

## PUBLIC GARDENS.

**New open space at Hampstead.**—London County Council has just completed the purchase of Fortune Green, West Hampstead, which is to be used as a recreation ground, for £8000. The green comprises about three acres to be maintained as an open space by the Hampstead Vestry, which has agreed to contribute £3000 towards the purchase, a similar sum having been given by the Council, and the remainder raised by subscription.

**Wandsworth recreation ground.**—On Friday last, at a meeting of the Wandsworth Vestry, Dr. T. A. I. Howell read a letter from Dr. Longstaff announcing that he would have much pleasure in giving a sum of £5000 towards the £6000 required to complete the purchase of a large tract of land in the Putney Bridge Road playing fields for Wandsworth. Dr. Howell explained that the land was over nineteen acres extent and had a frontage to the river of nearly 1500 feet. The purchase price was £31,300, a part of this amount the London County Council had voted £15,500, while the Wandsworth District Board had voted a sum of £10,000 towards the purchase. The balance therefore left was about £6000. Now that Dr. Longstaff had given the handsome sum of £5000 they only required £1000 to complete the matter, and he felt confident that they would soon get that amount.

**Kew Gardens.**—Mr. Akers-Douglas, Friday last received a deputation from the Richmond Town Council to urge upon him the desirability of throwing open Kew Gardens to the public on week-days. Mr. Akers-Douglas, in reply, while promising to give the views of the deputation careful consideration, held out hope of their request being complied with. Subsequently, the First Commissioner of Works received a deputation on the same subject from the Kew Gardens Earlier Opening Committee. A petition signed by 5000 memorialists from parts of the kingdom in favour of the concession was handed in. Mr. Akers-Douglas, replying to the deputation, said the *raison d'être* of the existence of Kew Gardens was the valuable scientific work it did, and he could not be expected to do anything in the way of extending the hours of opening which the gardens were open to the general public if it would interfere with that work. The financial question did not weigh with him at all for if he were convinced that the interest of science would not suffer by the earlier opening he should endeavour to persuade the Treasury to grant any extra money required. The sole question for consideration was whether the interest of science could be combined with the desire of the people for the earlier opening, and he regretted to say that the scientific men whose opinions had obtained were entirely opposed to the proposal. From a scientific point of view the experiment had not been a success in Edinburgh, and they had no reason to anticipate any better result at Kew.

**Royal appointment.**—We learn that Henry George Smyth, of Goldsmith Street, Drury Lane, has been appointed by royal warrant hereditary cultural sundriesman to Her Majesty. This, we believe, is the first appointment of the kind which has been made.

**Royal Horticultural Society.**—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, August 11, in the Drill Hall, James Street, Westminster, from 1 to 5 p.m. A lecture on "Cross Fertilisation of Florists' Flowers" will be given at 3 o'clock by Mr. James Douglas.

**Names of plants.**—*Henry Haines*.—1, *Eclipta* sp.; 2, *Olearia Haasti*; 3, *Teuila Helenium*. G. A.—The Plume Poppy (*Bocconia cordata*).

**Names of fruit.**—A. J. M.—*Rubus laciniatus*

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## ORCHIDS.

### STAGING ORCHIDS.

THE appearance of Orchids and also their well-being under cultivation are much affected by the way they are placed in the houses. In many structures that are unsuited for them they may, if judiciously arranged in suitable positions, make much better progress than if set up in a promiscuous style, as is unfortunately too often done. Many houses are built too narrow to allow of a central stage, or, rather, head room to get round it, and in consequence the staging is placed on either side of the central walk, a capital plan for small plants of such as Odonoglots, Masdevallias, Oncidiums, and many others, but one fraught with a great deal of inconvenience when a collection of plants of various sizes has to be arranged. If one arranges the larger plants of such kinds as Cattleyas and Laelias along the front, it is difficult to get behind them in order to deal with smaller plants: while, on the other hand, if the large ones are at the back, they keep the light away from smaller ones. It is difficult to know how to arrange such houses, and the best way is an intermediate plan. Place one large plant in a position suitable to it and arrange smaller ones round it, those liking a shady position being kept to the front where the large specimen in a measure shades them, the kinds that like more light being placed behind, where, owing to the slope of the roof, they are nearer the glass. The individual large specimens will not be exactly in a line, but placed alternately, so that every one keeps a minimum of light from those round it.

A much better arrangement can be effected where there is a central stage with small side stages around it. Here positions may be chosen to suit plants of all kinds, from the shading Celogyne, Cymbidiiums, Lycastes and Cypripediums to such as Dendrobies and Saccobabiums, that delight in sunshine almost unalloyed. Small plants in most cases need to be

elevated a little, not only on account of light, but because it is very difficult to damp between them with the syringe without wetting the surface compost continually. This causes it to be moist when the time for watering comes round, the plants are missed, and the lower part of the compost and roots go on getting drier until the plant suffers. The pieces of lattice-work raised above the solid portion of the stage are good if only small plants are cultivated, but where small and large are grown together it reduces the head room, a better plan in this case being to set the large plants down on the shingle or slate and put the smaller ones on inverted pots. All plants suspended from the roof, whether in pots, baskets or on blocks, ought to be hung just over a path or a water tank, never over other plants if it can by any means be avoided. It is a bad plan to hang them from eyes driven or screwed into the rafters unless the latter are provided with drip grooves. A better plan is to run a wire or small rod the whole length of the house and hang the plants to this. Every plant, in whatever position, should have sufficient room about it to allow of its being turned round for examination, and, where possible, no one plant should be allowed to touch its neighbour. Such things as Panicums, Tradescantias and small Ferns are often planted about Orchid houses to a very injurious extent, harbouring insects and keeping the air from circulating freely about the Orchids. A few cuttings of Panicum dibbled into the shingle on the stage do no harm if not allowed to get too large, but when it comes to hardy and cool greenhouse Ferns growing in tropical houses, it is carrying the thing too far. Many a troublesome attack of black thrips among Orchids may be traced to this practice.

**Oncidium phymatochilum.**—Under the head of Orchids in the issue of July 10, *Oncidium phymatochilum* is mentioned at Mr. Bull's with the spikes rising to the height of 18 inches. It may interest your readers to know that I flowered a spike 9 feet 7 inches long—the longest side

branch 2 feet 8 inches, and from tip to tip of basal side branches 5 feet; there were thirty-eight side branches of inflorescence. It was shown at the last meeting of the Royal Botanic Society of Edinburgh.—SIR A. B. HEPBURN, *East Lothian, N.B.*

**Grammatophyllum Ellisi.**—This is not so large growing as some of the other species, but as handsome as any when in flower. The pseudo-bulbs seldom exceed a foot in height, the leaves rather longer, and the flowers, thirty and upwards together, occur on an arching raceme. The sepals and petals are yellow with brown blotches, the lip rosy white, and the whole flower has a shining varnished appearance. Being a native of Madagascar, plenty of heat and moisture is necessary, and the plants need only be shaded from the very brightest sun. The plants are very free rooting, and may be grown in peat fibre and Sphagnum, with good drainage. Plenty of water while growing and a distinct resting season are necessary to ensure their flowering.

**Cattleya superba.**—This fine plant is again in flower, but the growth this season is not so hard looking and solid as I like to see it, and cultivators must be careful to allow plenty of sunshine from now onwards. Often while in flower, if the plants are removed to a drier atmosphere, a certain degree of ripening goes on that is beneficial, and tends, too, to conserve the flowers. The flowers are of medium size, very bright and effective in colour, and occur on spikes of about four or five from the top of the bulbs. To grow this fine Cattleya, plenty of heat and moisture and a light position are necessary, and the roots must not be disturbed oftener than necessary. Too large pots or pans are a great mistake, and a well-known and successful cultivator recommends growing the plants on blocks of Tree Fern stems. *C. superba* is a native of some of the warmest parts of South America, and was introduced in 1838.—H.

**Pilumna fragrans.**—This is very erratic in its time of flowering, but the pretty and fragrant blossoms are always welcome. The pseudo-bulbs are very much flattened, deep green, the foliage thick and almost leathery in texture. The spikes, which spring from the base of the last-formed pseudo-bulbs, are erect and carry about half a

dozen pure white blossoms with a dense orange-yellow eye. The plants when newly imported are not difficult to establish, but when they get out of condition under cultivation, more trouble will be found to get them to start again. Often when I have purchased plants from nurserymen or at sales I have found when examining them that they have not a single living root, owing to the compost having become sour. This is of course a serious drawback, and should be prevented by using the best of material only when potting and watering judiciously, yet freely. Good drainage is required, and everything about the plants must be clean. It thrives well in the cool house if carefully treated, but is perhaps safer in a house a few degrees warmer. No dry rest is necessary, though of course during winter the plants will not dry so quickly and will consequently need less water.

**Vanda Parishii.**—This plant has not the grace and elegance of some of the other Vandas, but is a distinct and beautiful plant notwithstanding. In habit it is dwarf and stout, the oblong leaves very thick and leathery, the bloom spikes much stiffer than usual in the genus, and containing fewer, but larger flowers. In the typical form these are each 2 inches across, the sepals and petals yellowish, thickly covered with reddish brown spots, the lip white, marked with orange and pink. To grow *V. Parishii* well, a fairly large receptacle is needed, as the roots are easily snapped if much bent about, and seem to delight in growing in straight lines. Clean Sphagnum Moss is the best material to grow it in, adding to this enough broken charcoal and ballast to keep the whole porous. It may be repotted in early spring, as less damage will be done to the roots at this time than when the latter are in active growth. Plenty of heat, plenty of light and a moist, well-balanced atmosphere it delights in, these conditions causing the emission of fine healthy roots in the atmosphere and a satisfactory state of health all round. In a cool or draughty house it is perhaps more likely than almost any other species to be attacked by spot. *V. Parishii* was originally discovered by the Rev. C. S. Parish, who found it in Moulmein in 1862. It was not, however, until some years later, when Messrs. Hugh Low and Co. imported it, that it became known to Orchid cultivators in this country.

#### UTRICULARIA ENDRESI.

The Bladderworts are such interesting and graceful-looking plants that it is difficult to account for their scarcity in gardens. One may go into scores of places and not see a plant of any of them; consequently a fine basketful of the pretty species named above came as a pleasant surprise recently. The scapes contain about half a dozen flowers of a delicate lilac tint, and the stems or pedicels being so very slender, these appear to be floating in the air. *U. Endresi* is not by any means a difficult plant to grow, but, like so many things of a like nature, it is apt to be forgotten when the leaves have fallen in winter. The rhizomes and roots have nothing in them to allow of the compost being kept dry for any length of time, and if this drying off is practised it will assuredly mean their ruin. Keep the material about the roots just moist not wet—during the time the plants are resting. This keeps the buds at the end of the rhizomes plump and ensures their starting strongly in spring. The best material to grow this plant in is a similar compost to that used for the usual run of pseudo-bulbous Orchids. Sphagnum Moss three parts and an elastic fibrous peat one part, with finely-broken crocks and charcoal in abundance, will grow it admirably, and the less the roots are pulled about the better. When well started into growth in spring, a free supply of soft water is necessary, and from this time onward until the foliage begins to turn the roots must be kept wet. I am not sure that hard water injures the plant itself; only indirectly by spoiling the Sphagnum around the roots. A shady corner—over a water-tank if possible—is the best place to grow it, and as it re-

quires stove-heat, the East India Orchid house will suit it admirably. But though it likes shade, it is not so satisfactory if placed a long way from the glass as it is hung up within a couple of feet of the roof. In winter it is safe in a house that does not fall below 60°, and at this time as much air as possible should be allowed. R.

#### EPIDENDRUM NEMORALE.

In its best forms this species is worthy of a place in the most select collections. The habit is somewhat peculiar, the pseudo-bulbs being only a few inches high, yet bearing very long bright green leaves, each about an inch or less in width. The scapes are often 2 feet high, the upper portion closely studded with the pretty reddish mauve blossoms, the narrow sepals and petals and broader lip being similar in ground colour, the latter much overlaid with lines of a deeper purplish tint. It makes a fine show when well grown, but requires a certain amount of care. The roots require fairly liberal treatment, but at the same time are easily injured by any excess of moisture or closeness in the compost. The drainage on this account must be exceptionally good and protected by a layer of rough Moss, over which a couple of inches of compost are ample, this consisting of the best quality peat fibre and Sphagnum Moss. In removing the old material from about the roots care is necessary that these are not damaged or disturbed more than is absolutely necessary. In fact, the first sign of failing with this fine species has often been when repotting, and when once it is severely checked it is no easy matter to bring it round again. The plant is not always constant in its habits of growing, resting, or blooming, and the time for repotting must to a certain extent be left for individual consideration. But it is better in all cases to be early rather than late, and thus to give the plants the best possible chance of getting well established before the winter, when scarcity of light and oftentimes unsuitable atmospheric conditions militate against its well-being. During this latter season it is best grown in a house where plenty of light reaches the plants all round and where the air currents are free. Even in summer it is surprising how little shading is required provided the plants are healthy and well watered and the atmosphere kept moist. Some plants I have seen do well in a cool house, but as a rule the Cattleya house, or at all events the Mexican house, suits it best. Endeavour to consolidate the growth as it is made rather than rush into quick changes of atmosphere and temperature. If a good solid growth is made and the plants kept clean and healthy, it can hardly fail to bloom profusely, the fragrant blossoms lasting well over a long period. *E. nemorale* is sometimes known as *E. verrucosum*, owing to the warty appearance of the flower-stems, but the true *E. verrucosum* is a little-known and inferior plant from Jamaica. The subject of this note is an old species, having first been imported in 1843 by Messrs. Loddiges. Its native home is a wide area in Mexico, where it is found growing on the tallest trees. H.

**Phalænopsis violacea.**—This pretty plant I have noted in several collections this week, the whitish purple-tinted blossoms having a fine and distinct appearance. It is one of the most free-blooming of Orchids, and should be grown by all. It is a dwarf plant with bright green leaves, each about 8 inches in length, and requires care to grow it well. The best position for it is in baskets not far from the roof glass in a hot, moist house, and the leaves must be shaded from bright sunshine. It comes from Sumatra and has been known since

1859, but it did not flower in England until 1878.—R.

**Aerides affine.**—Several nice specimens of the true type of this plant are now to be seen at Clapton, the long pointed racemes of flower being very attractive. It is a dwarf-growing plant easily distinguished from other *Aerides* by the colour of the flowers, a pretty bright purple-rose and the shape of the lip. It is often met with under the name of *A. multiflorum*. Though previously known, Messrs. Loddiges, of Hackney first flowered this species in 1837.

**Bulbophyllum claptonense.**—Under the name there is a very distinct looking *Bulbophyllum* in bloom with Messrs. Hugh Low and Co. In habit it comes nearest to *B. Lobbi*, but the flowers are larger and the plants stronger in growth. The scapes bear a large number of blooms, the sepals and petals being a brownish yellow, with good many lines of dark sepia-brown. The lip reddish purple in front, the centre yellow and the margin rose—a peculiar, but not unattractive combination.

**Catasetum Christyanum.**—All the *Catasetums* are quaint and interesting Orchids, and this species now in flower with Messrs. Hugh Low and Co. is no exception to the rule. It is a stout grower, the pseudo-bulbs tapering upwards, bearing fine deep green foliage. The flower-spikes erect, carrying over a dozen blooms, the sepals and petals of which are chocolate-brown. The lip of the usual structure, with sensitive horns near the column, and in colour a bright green and purple.

**Bletia Shepherdi.**—One of the oldest Orchids in cultivation, this is still well worth a place, and I have noticed its brilliant flowers in several collections lately. It blooms at various seasons, the blossoms occurring on tall erect scapes, each one about a couple of inches across, bright reddish-purple with deeper crest and a yellow centre to the lip. It is of the easiest culture, requiring only moderate heat and to be grown as strongly as possible. After flowering the foliage soon shows signs of decay, when the pots may be turned out of doors and kept a little on the dry side until again starting into growth.

**Sobralia xantholeuca.**—The blossoms of this Orchid are fairly large, the colour a lovely combination of yellow and white, the centre of the lip being the deepest part. Dwarf in habit, free-flowering, and easily grown, it has but one fault, that is the fleeting character of the flower. In the small-flowering house at Messrs. Veitch it is now quite a feature blooming alongside *S. Lucasiana*, *S. Wilsoni*, *S. Veitchi*, and several others. The last-named is a lovely form with pure white sepals and petals, the lip yellow in the centre, white around the outside with a faint flushing of violet-rose on the margin.

**Lælia Lindleyana.** This distinct and rare species was recently in bloom at Messrs. Hugh Low and Co.'s nursery at Clapton. It grows about 1 foot high, producing from the apex of the terete pseudo-bulb a scape usually containing one flower only. This is about 4 inches across the segments narrow and pointed, giving the flower a star-like appearance; the lip white, with a purple blotch on the middle lobe, this being also spotted with a deeper tint. It requires Cattleya house treatment, and does best in rather small pots. Its native habitat is Santa Caterina, in Brazil, whence it was first introduced in 1857.

**Phalænopsids at Clapton.**—In a large, low span-roofed structure at Messrs. Hugh Low and Co.'s nursery at Clapton there is a very large stock of *Phalænopsids* in all the leading varieties. Not many plants were in bloom at the time of my visit, but the appearance of the plants is abundant testimony that their wants are well known and catered for. Fine pieces of *P. amabilis* had made remarkably fine growth, and this as well as *P. violacea*, *P. intermedia* and *P. rosea* were in bloom. The beautiful foliage of *P. Schilleriana* and *P. Stuartiana* was in good form, while the roots of all were very vigorous and

ective. Hybrid raising was going on briskly, several of the plants having arrived at flowering size, while hundreds of smaller ones are in every stage of development.—R.

NOTES OF THE WEEK.

**Pelargonium King of Denmark.**—This kind promises to prove of considerable value in the garden, the handsome trusses of deep salmon-tinted flowers being produced in large numbers. In a cut state it is also most effective.

**Tritoma Solfaterre.**—Though distinct from the majority of this fine group, this is scarcely a plant for effective gardening, the flowers of a pale greenish white or creamy tint, together with its dwarfer habit, being quite inconspicuous.

**Verbena Tresserve.**—This is the name of a very pretty and showy Verbena exhibited this week at the Drill Hall by Mr. J. T. Bennett-Poë. In colour it is very attractive, being of a clear rose-scarlet shading to white in the centre. The flower-heads are of medium size, and in a mass very bright and cheerful looking.

**Crinum longifolium.**—This very neat species has noted recently in flower at Kew adjacent to the large Palm house. The flowers are white with a flush of pink externally, and freely produced in umbels, the perianth tube, as also the potstalk, being rather more than usually elongated, and the nearly erect blossoms very pleasing in form.

**Carnation Mrs. F. Gifford.**—Despite the fact that the petals of this variety are slightly tinged—in other respects, *e.g.*, its fine form, pure white petals, and remarkable size and fragrance—it promises to be a most useful variety for cutting for the border. For such free-flowering and fragrant whites there is yet abundant room in any garden.

**Carnation Andrew Noble.**—One of the improvements in the Carnation that the florist has fixed his mind upon recently is that all the petals shall be as nearly uniform in size as possible throughout the flower, an ideal that the above variety appears perfectly to attain. In other respects also it is a fine Carnation, particularly in its size and the salmon-rose tint of its flowers.

**Astilbe Thunbergi.**—The large, slightly arching plumes of creamy white flowers characteristic of this plant are now very showy among good herbaceous plants. Of a perfectly hardy, vigorous, and free growing character, this handsome perennial should be freely employed, not only in the border or rock garden, but in semi-shade and moist positions where such things usually attain their fullest development. In heavy, moisture-holding soils these Astilbes are generally a success.

**Campanula Scheuchzeri alba.**—This is a capital kind that is only rarely given in lists, and still more rarely is it seen true to name. At first sight the blossoms are not unlike those of *C. rotundifolia alba*, though rather larger and slightly bolder in the bells. In habit the plant is distinct, growing when established about 18 inches high, and producing freely its pure white bells in profusion. The rather narrow linear leaves, as also the stems, have a close pubescence by which it may be distinguished at a glance.

**Echinacea purpurea** is now a striking piece of colour almost unique in the garden just now. Its fine tufts, 3 feet high or more, self-supporting by reason of the fine habit of growth, and crowned with the large, handsome rosy-purple blossoms, are not easily matched in the garden at this time. Not the least valued of many fine plants is the well-balanced and branching character of the flower-stems, the latter erect, safe and rigid, and supporting large numbers of flowers. At the present moment it is one of the most desirable of hardy flowering plants, exceedingly fine in the general effect and conspicu-

ous at some distance. Besides this, the plant flowers abundantly.

**Bocconia cordata** (the Plum Poppy) is now a striking object in the border. Individually the blossoms are small and by no means of a striking colour. On the other hand, however, where many of its large terminal inflorescences are seen together the effect is excellent. The foliage alone is handsome, and when the groups are placed on a sloping grassy bank in proximity to the rock garden, the plant will hold its own against many far more costly things by reason of its beautiful foliage. This is always seen to best advantage when planted in a group on the grass.

**The Creeping Fig in fruit.**—I am sending a fruiting branch of *Ficus repens*. This is from a plant growing under glass. A few years ago it threw out strong shoots from the top, and has fruited this year for the first time; the rest of the plant is still small in leaf and clings to the wall. I may mention that there is a plant here which has been growing out of doors for the last ten years or more. I am also sending some flowering sprays of the *Eucalyptus Gunnii*, or what I believe to be that. We have two plants in a shrubbery, but only one has flowered. They seem to be quite hardy, as they have been growing for the last five years or more, and so have survived some exceptional winters.—DANIEL C. A. CAVE, *Sidbury Manor, Sidmouth.*

**Lilium platyphyllum var. virginale.**—There are few Lilies that can in any way compare with this noble and chaste variety of the well-known *L. auratum*. The giant flowers of *L. virginale* are without a spot of any kind, the segments very massive and pure in tone, a fact only enhanced by the creamy-yellow band that runs through the centre of the petals. In common with *L. platyphyllum*, there is an increased vigour in the above kind, which, coupled with its handsome pure white flowers, can scarcely be excelled. As a pot plant in limited quantity in the conservatory, or in groups among the Rhododendrons in the garden, this noble kind is worthy attention. It was well shown by Messrs. Wallace at the Drill Hall on Tuesday last.

**Hymenocallis Macleana.**—Among many interesting bulbous plants flowering in the open near the Palm house at Kew is this charming species, which may be recognised as *Ismene Macleana* by some readers of THE GARDEN. It is a beautiful species, and would prove most welcome for its blossoms could the latter be produced in quantity with some degree of certainty. The outer segments are pure white, tube greenish, excepting the tip, which is also white, thus producing a very pretty effect. The plant is nearly hardy, and may be well grown if planted out in a frame or handlight. Indeed, a small frame filled with this and similar plants would provide a variety of interesting material during the year if a careful selection were made.

**Gentiana septemfida.**—Among the summer-flowering Gentians this is always very fine, and at the same time duly appreciated. Large examples, however, despite the fact that it is easily cultivated, and that it may also be raised somewhat freely from seeds, are not common. This species is well suited to the rock garden, where a deep crevice of very rich sandy loam should be given it. The position should be rather moist, or, failing this, water should be freely given during the season of growth. For two or three weeks this lovely species has given freely of pretty pale blue and white blossoms, the segments of the latter crested internally in the most pleasing manner. The plant is of somewhat procumbent habit and produces its nearly cylindrical blossoms in terminal clusters.

**Nymphæa Marliacea flammea** is another of the splendid series of Marliæe hybrids that are being so well received in this country, and at the same time honoured as they justly deserve with the highest possible awards. The above kind, exhibited before the Royal Horticultural Society on Tuesday last, obtained a first-class certificate, the flowers being of medium size and of a reddish-

purple shade, varying in intensity with the age of the blossoms. Such distinct and striking patches of colour will afford great contrasts in the future in our ornamental lakes and ponds, and to those who desire their young plants to make the greatest headway, it may be well to suggest that the flower-buds be gathered as soon as they appear, thus concentrating for a year or two all the energies to developing larger plants.

**Romneya Coulteri.**—In reference to "S. W. F.'s" interesting article on the *Romneya Coulteri*, I am pleased to say this beautiful plant so rarely met with does well here. I planted one about four years ago, and it has flowered every year since, but this year it has been exceptionally fine, as many as nine blooms being fully expanded at one time. As it is planted in the open I protect it through the winter months by placing a layer of coal ashes with a dusting of lime over the surface, and then thatch the whole of the plant with straw. This is done in November and removed in April, when it commences growth. In this way it came safe through the severe winter of 1894-5, when on one occasion we had 36° of frost. I noticed Messrs. Dickson's had a nice group of this beautiful plant in pots at the Chester show.—G. J. SQUIRES, *Llangwynn Gardens, N. Wales.*

**Gloriosa superba.**—As a trailing or climbing plant for the greenhouse this is one of the most worthy. It is generally an easily managed plant, though one or two points are perhaps essential in its cultivation. These are a good open compost of fibrous peat and loam, rather rough in both instances, and careful treatment in the early stages, *i.e.*, when starting the plants into growth. Indeed, like many other things having fleshy, tuberous or bulbous roots, quite a little moisture will be found sufficient till growth has become quite active. At no time will the plant bear excessive supplies of moisture, and to prevent this plenty of drainage should be given. This, combined with warm greenhouse treatment and frequent use of the syringe till the near approach of flowering, will help to keep insects in check. There is something very ornamental as well as distinct in the strangely formed flowers of orange and gold, while the wavy margins of the perianth segments render the flowers even more attractive. Though the plant has long been known to cultivation, it is not of frequent occurrence in gardens. During the present year, however, we have seen the flowers employed quite effectively in dinner-table decorations, also in epergnes and as sprays for the hair and such like.

**Campanula Van Houttei.**—Among border Bellflowers this is certainly one of the finest, the plant quite distinct with handsome drooping bells nearly 3 inches long. Happily, too, it is of the easiest culture. It is well not to allow the plants to remain too long in the same position, as by dividing and replanting in February or March each year renewed vigour with greater freedom of flowering is ensured. In deep, rich, and rather moist sandy loam such fine plants as this are capable of creating a good display, and the flowers of a dark lilac-blue shade are not easily matched. This fine plant is of hybrid origin. It is frequently referred to under *C. latifolia*, and it is not unlikely that this somewhat coarse plant may have been one of its parents. I am not aware of the origin, but, judging by the manner of reproduction from the base, as also its more refined character of leaf and blossom, it seems likely that *C. punctata* or *C. nobilis* may have participated. The creeping underground stems or shoots in *C. Van Houttei* are quite unlike those of *C. latifolia*, while it resembles in a greater or less degree each of the other kinds here named. But whatever its origin or parentage, it should be found in all good herbaceous borders, and, while producing underground stems, it is only in a minor degree, as these never stray from the plant but a few inches.—E.

**Erythrina crista-galli.**—It is to be regretted that gardeners generally do not endeavour to grow this plant more frequently in the open ground. In many districts the plant is practically hardy in

all but the very occasionally severe winters, and then a timely covering of the resting stools is all that is required. We are reminded of the importance of this handsome species by a recent experience in a garden quite near Hampton Court, and, of necessity, the river also. This specimen, we were informed, has stood out for several winters and blossoms regularly each summer; indeed, it was fast approaching this stage when we noted it recently. All that is needed is a warm position at the base of a greenhouse wall, with a depth of good soil and fair drainage, and when winter approaches to cover the crowns with cocoa fibre or ashes. A year or two since we saw it in splendid condition in a nursery near Hereford, and here, as usual, the plants were against the wall of the greenhouse, the growths between 6 feet and 7 feet high, with many of the striking coloured blossoms on each growth. It may be said that such positions are not suited to so good a plant, and this may be true to some extent. In this case the example set at Kew each year of growing the plants in large pots or tubs should be followed, plunging them in groups in some conspicuous positions in the flower garden, and wintering the stools in any frost-proof place. In this way, if carefully attended to with water, such groups could not fail to prove both attractive and interesting. At the present time many fine examples are quite a feature at Kew.

#### ORDERS OF MERIT FOR FARMERS AND GARDENERS.

APROPPOS of what we think the doubtful action of the Royal Horticultural Society in instituting an order of merit, the following may be interesting. In France we believe these orders are under State control, and if societies have the power to create honours of this kind, where are such things to stop? We shall soon have the barbers or any other society of men establishing fountains of honour.

The love of decorations is a national disease in France, from which even the highest do not escape, and an anecdote which is told of the Chancellerie is characteristic of this. When the Order of Merit for farmers was created, General Rousseau, who was chief secretary of the Legion of Honour, placed himself on the first list as officer of the new order of merit. General Faidherbe, the distinguished soldier, was the Grand Chancellor of the Legion of Honour, and as such this list came under his notice. He sent for the chief secretary.

"How is this, Rousseau?" said he; "you, who possess every imaginable and possible decoration, assign to yourself the Agricultural Order of Merit also."

"Well," replied the excellent Rousseau, "but it has been created."

"But it is a decoration for farmers only."

"Yes, for farmers, and for others also, like all decorations."

"Oh, is that so?" said Faidherbe: "now I understand." And before returning the document to the Ministry he struck out the name of General Rousseau and put in his own!

It will, we fear, be a little ridiculous to see gardeners swaggering about with decorations of any kind. There may be a few distinctions worth keeping up, such as, say, the Victoria Cross, but all such honours are better under State control. But if doubtful in its higher forms, what are we to say to this extending of the false jewellery of honours to men like gardeners and farmers? Its effect in various ways will not be good, and, not least, in ignoble waste of time in seeking such distinctions, which are, we fear, in the long run given to those who seek them most and take the trouble to worry people to aid them in getting such baubles. In France it is more excusable perhaps than with Britons,

as the French have a mania for decorations, though some Frenchmen hold that among the many evils inflicted on France by the first Napoleon, the institution of the Legion of Honour was by no means the least.

#### FERNS.

##### SOME NEW ADIANTUMS.

THE Maiden-hair Ferns are, perhaps, the most beautiful and certainly the most popular. Although we have such a large number of distinct species, we are constantly getting further additions in the way of garden varieties. Many of these are most interesting, and it is very difficult to account for the variations which occasionally occur, for, as a rule, there is little variation even among seedlings of garden varieties. Take as an instance *A. cuneatum grandiceps*; this prettily tasselled variety may be readily obtained from spores, and among thousands of seedlings scarcely any variation will be found. *A. cuneatum grande*, *A. versailleense*, and *A. c. erectum* are other examples. In some cases, however, it is difficult to raise seedlings of hybrid origin. Although I have tried many times, I have never raised *A. Veithei* (the beautiful crimson tinted Maiden-hair) from spores, at least not to get it true. I have had seedlings which have proved to be a bad form of *decorum*. Some other garden varieties are equally difficult. I only know of one instance where what appear to be good spores are not produced, and this is the beautiful *A. Farleyense*, which although imported from Barbadoes is undoubtedly of hybrid origin. I have for many years used every opportunity of searching for spores, but have always failed. To revert to varieties raised from spores, one of the most remarkable instances I have known was a batch of several hundred seedlings raised in Mr. H. B. May's nursery a few years ago. The spores sown were from *A. æmulum* and *A. Waltoni diffusum*, which had been accidentally mixed together. Whether this resulted in cross-fertilisation or an ordinary freak of nature is uncertain, but a more variable batch of seedlings I never saw, and several of them have proved to be distinct novelties, and have been recognised by the Royal Horticultural Society, two having received first-class certificates, and four awards of merit. Of these, *A. elegantissimum* is very distinct, having much divided fronds, with very small, deep, wedge-shaped pinnules, the terminal ones being larger; it has black stems and the deep green shade of *A. æmulum*, to which it is undoubtedly allied. *A. fasciculatum* (F.C.C.) is erect growing, irregularly branching from the main rachis. The pinnules, closely set, vary in size, the terminal ones being much broader; it forms a symmetrical plant of a rich deep green. *A. Hemsleyanum* (F.C.C.) partakes more of the habit of *A. Waltoni diffusum*, but is more erect in habit. It may be grown from 15 inches to 18 inches high in a 4½-inch pot; the large, finely-cut fronds droop over just enough to give it a light and graceful appearance. *A. plumosum* (A.M.) is of dwarf habit, with small, nearly triangular fronds of a soft pale green; the medium-sized pinnules are deeply lobed. *A. Schneideri* (A.M.) is of similar texture, with long, erect stems, the soft pale green fronds slightly deflexed. *A. tenellum* (A.M.) is a very pretty variety with broad spreading fronds, the pinnules being deeply cut. Besides those named above, many others might have been selected as being worthy of distinctive names. With many seedling Ferns, variations will be found from year to year; in some instances they do not show their distinct characteristics until they are two or three years old. This is particularly the case with some of the *Adiantums* of *A. cuneatum grandiceps*. Plants two years old form much prettier tasselled fronds than younger ones do. Even with *A. elegans*, young plants are rather inclined to be loose and straggling, but the second year they make much more compact plants.

A. H.

#### PARK AND WOODLAND.

##### GERMAN WOODS.

A good deal has been written and said on this subject of late, and those who read papers on forestry know that something akin to revolution in forestry practice is in progress in this country at the present time. The "standard" British books on forestry that have done duty for generations and been implicitly followed by owners of woods and their foresters are withdrawn from circulation, acknowledge to be radically wrong, and German authorities substituted in their place by arboricultural societies and responsible teachers of forestry; will be admitted, I think, that "revolution" the only word for it. A few foresters have been long enough acquainted, theoretically, with German forestry, conducted for the production of timber, but actual examples in this country except where accidental and on a small scale, would be difficult to find; hence one has to go abroad to see examples, and one visit is enough to enlighten and convince any forester with mind open to conviction as to the superiority of the Continental system. It was in that mind that the writer undertook the journey about to be described. Going with organised excursion is not the best way to see the forests, because time and critical personal observation are curtailed thereby; nor are the tourist agencies much use, because they skip the forests. I could not get tickets to my destinations at any rate I was indebted to the kindness of Dr. Schlie of Cooper's Hill College, for advice where to go to see good average examples of forests, and Dr. Konig, of Lauterberg, Oberforster in the Hartz Mountains, and Oberforster H. Kallebach, of Thuringia Waldt, Eisenach, for arranging the programme of the journey, and I shall not forget the kindness of these gentlemen, for they took infinite pains to satisfy somewhat inquisitive inquiries.

##### EXTENT OF GERMAN FORESTS.

Those who wish to get an idea of this should travel by day, and not by night. A very good deal can be seen from the railway as the forests recede from or approach the line, according to the character of the country. Every morsel of land not suitable for agriculture seems to be covered by dense forest right away to the summits of the highest and most distant mountain where a good glass reveals the tops of the dense masses of Firs or Beech with which they are clothed, and when you reach those mountains on which, in the distance, the trees look like coppice wood, you find yourself in dense, dark woods where the trees often run up to over 100 feet in height. I calculated that in a single journey through part of Westphalia, Hanover, the Hartz, Thuringia, and onward till one emerges on the upper reaches of the German Rhine, I saw nearly 1000 miles of continuous forest. I saw few or no bare hills, no heather, nor no underwood in the English sense of the word. Central Germany is a high table-land to begin with, and the mountains do not look as high as the Scotch mountains do, which rise almost from sea-level, and, being wooded to their tops, the German hills look more rounded, but they are lofty nevertheless—the Brocken, which stands in the middle of an almost unbroken stretch of wooded mountains, being nearly as high as Ben Lomond. One soon realises how 26 per cent. of the land in Germany is covered by forests and only 4 per cent. in Great Britain and Ireland, but when we compare the density of the German forests

with our own, I feel quite sure that 2 per cent. could represent the latter much more accurately. Let the traveller imagine himself travelling from the south of England to the north of Scotland along the skirts of the Penine range, down one side and back up the other, and all the hills covered with forests, all managed on one strict system, and he will have

the limit mentioned as worth while planting up to. In the

HARTZ MOUNTAINS,

however, in about the same parallel as England and Ireland, they plant Firs much higher up, and I saw forests of Beech trees 80 feet to 90 feet high 1800 feet above the sea. Probably neither in Britain nor Germany would isolated trees ever reach such dimensions at such altitudes, or even timber size, and the stunted trees at the edges of the German woods show this plainly. For shelter reasons alone the margins are more like hedges in density, the trees often about 2 feet apart only, or less. These remarks apply also further north than any I saw.

In these forests and elsewhere I found our old friends that keep down prices at home, viz., telegraph and scaffold poles, pit props, and deals in all stages of growth and preparation. I have often wondered how they could afford to peel the dead bark of the poles delivered so cheaply in this country, but it is a simple and speedy operation, the workman just running his little axe along the pole and stripping the bark off in

long ribbons, heaps of which cover the ground where the trees fall. The timber that comes from Germany to this country does not come so much from the Hartz, but from the States further north. Germany uses a vast quantity of its own timber, and Central Germany sends much to Holland. Still, one can understand, from what he sees everywhere, how it comes about that, of the total quantity of timber sent

to Britain from Germany, £15,000,000 worth represents Scotch Fir and Spruce alone. After all, what we get is but a flea-bite to German production. Holland has been, and still is, a large buyer, its forests being of comparatively small extent and still young. Between Amsterdam and the Prussian frontier in North Holland the country is practically treeless, with vast tracts of sand-dunes fit to plant, and at present a desert; but in the south, extensive plantations of Scotch Fir have been made, strictly managed on the German principle of dense planting and no thinning. In numerous cases the owners of small holdings have planted these up to the edge with Firs, and as the plots are usually perfectly square, these occasional plantations have an artificial look standing among corn and other crops. The Scotch Fir seems to thrive amazingly in the pure sand lands. In the Hartz Mountains Spruce and Beech predominate, but in Thuringia and further south towards Frankfurt - on - Main Scotch Fir about equals all other species put together, and covers the tops of hills where it almost dovetails into the vineyards further

down. Huge rafts of Scotch Fir are to be seen floating down the Upper Rhine.

The Germans use much of their own timber for building, whole villages apparently consisting of little else than lath and plaster. Some of the gable ends between houses I noticed, even in Eisenach, were of boards inside and out, filled in between with wattlework and mud. Most of the furniture of somewhat pretentious hotels and houses is made from the timber grown close by. The doors, windows, stairs, floors and other fittings are mostly of Spruce, Scotch Fir or Beech, and even such things as wardrobes are made of these Spruce deals nicely varnished outside. Timber seems to be a general substitute for stone and bricks, and there is a wealth of wood carving and ornamentation in private houses and in hotels unknown in this country.

THE CONTROL AND PLAN OF GERMAN FORESTRY.

A broad distinction must be made between German agriculture and German forestry. We have little or nothing to learn in the farming line, except the small-holding system (allotments would be a better name), long hours of labour in the fields, where the women work as much as the men, the total abolition of fences and hedgerow timber, and a thorough utilisation of every inch of ground, compared to which the practice of small holders in England is slovenly. The German agricultural methods and tools are, however, rather primitive, and German agricultural science is apparently made for British consumption. Much of the work on the land is done by the spade and hoe. I saw women, wives of the farmers, digging with shovels. One is puzzled where the pasture and cattle come in, because in a long journey through Westphalia, Hanover, and by Erfurt, Frankfurt, and on the Rhine the farm-lands seemed one unbroken patchwork of Rye, Potatoes, Chicory, Beet, Vines, &c. It is very different in the forests; these are mostly owned or controlled by the State or the Duchy in which they lie, are of paramount importance to the nation,



In a German forest. Edge of a clear cut. Trees 120 feet high. From a photograph by Mr. J. J. Simpson, Wharcliffe Estate Offices, Neutyle, N.B.

some idea of these German forests as compared with ours. From the railway the different timber crops, "compartments," can be distinguished as plainly as farm crops. From one point in the Hartz, the summit of the Knollen, a hill over 2000 feet high and next door to the Brocken, an unbroken expanse of forest-clad hills, embracing at least 500 square miles, can be seen, looking over the summits, and not including the ups and downs of hill and dale, and only allowing for a moderate sweep of the eye of twelve miles or so from the point of view. Up here the unthinned Spruce, less than 3 feet apart, three planted in a row ("bush planting"), over thirty years of age, about 20 feet high, was so dense, that I had to take off my hat and crawl under on my hands and knees to get inside. Talk of destruction by storms in Scotland; I never saw anything like the destruction that I saw here caused by "snow-breaks" alone. The snow lies many feet deep for months, and the trees are broken and smashed in all directions, and the damage would be greater if the trees were not so dense and could not lean upon each other. The dense planting is relied upon to ensure a sufficient crop in the end. Wind does not do so much damage, because the crops at all stages are too dense, but the wind-storms are there as well as with us, and the oberforster pointed out to me places where clear gaps had been made by wind where roads had been made and the wind had got in. The margins of the woods are denser than the inside for protection. Were it not for the dense crop, such tall trees with a slight root-hold would not stand even a moderate gale. It is not quite realised in this country how tall trees will grow at high altitudes when crowded together for protection. It was once stated in *Woods and Forests* that the Beech would not succeed on exposed situations, and in the Parliamentary forestry evidence I think considerably under 2000 feet was



In a German forest. Trees not yet thinned; about thirty-five years planted.

and their superintendence is almost as strict as that of the army. In fact, the forest administration is military. It is easy to see how this affects the management. The forester's work is cut out for him. The system of management is the same everywhere, and he must conform to it. German forest management is no recent thing. Experiments are on record that have

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continued for several generations, and experimental plantations of trees, now 100 feet high or thereabouts, planted nearly a hundred years ago, are still going on, the "Star Plantation" in the Thuringia Waldt, near Eisenach, being an example of this kind. Conferences of forest officers are held from time to time where subjects of interest are discussed, but German forestry is very conservative in principle. New introductions in the shape of exotic forest trees are not common in the forests, the Weymouth Pine being about the only species that has become established, and which promises well. Forestry practices seem to have altered but little, one oberforster following another, and each perforce following in the footsteps of his predecessor. There are promotions in the service, and it is not unusual for an oberforster to be transferred to another and a higher charge in some other district. One oberforster's charge generally extends to about 10,000 acres. A certain percentage of the forests are common woods, belong to the villages, and some belong to private owners, but in all, the management is, as a rule, the same—all are conducted to the best advantage by expert forest officers. One oberforster that I met had, in addition to his regular charge, 5000 acres of common woods under him. A large percentage of the timber goes for firewood. What we call "cordwood" here—"top and lop"—all goes for firewood, nothing being lost. Sometimes women from the villages are permitted to gather the small branches and tops, which they carry for miles on their backs to their homes, but as a rule the top-wood is cut and ranked and sold for firewood, per cubic mètre, for about the cost of collecting. The forests are consequently clean, and, owing to the dense canopy overhead, undergrowth is very scant or entirely absent, so that when the regeneration period arrives, the surface of the ground, covered deeply with humus, presents one of the most favourable seed-beds that could be imagined. In our over-thinned British woods the rank weeds and undergrowth smother the young seedlings to death, but in the German forests one wades knee-deep through miles of young self-sown trees that are to produce the next crop. In the State forests the oberforsters (forest officers) are also the gamekeepers, and conduct the sporting expeditions. One of these officers showed me a beautiful pin set with brilliants presented to him by the present Kaiser on one of these expeditions. The care of the game is not, however, arduous work. The game consists of deer, mainly, and now and then a wild boar, with a sprinkling of hares. Rabbits there are none, and no pheasants are seen. The deer are the chief four-footed enemies of the trees, and the destruction they work is enormous in some places. They are the perquisite of the oberforster. The rabbits are scarce because they cannot survive the severe winters and deep snows. They are unknown as an article of food. When explaining to a German forester our "happy-go-lucky" style of forestry in this country, and how it was mixed up with fox coverts, rabbits, pheasants, and sport, he seemed to be incredulous, especially about the number of rabbits tolerated in the woods. Our irregular system of management, differences of opinion and practice on different estates, over-thinned woods and want of plan seemed also to be incomprehensible. Pointing to a mass of Spruce over thirty years of age not yet thinned, a mass of dead under-branches, I said that would condemn any forester in Scotland as an example of neglect and bad management. My listener stared. I was asked why our county councils or other similar authorities did not ap-

point oberforsters to supervise whole districts, with the consent of private owners, and organise some recognised system of management to which foresters would have to conform. This idea seems a good one if it could be put into force, and would provide a shorter cut to better forestry than our schools and lectures. The Germans have forestry schools, but the whole practical art as practised by them is simple in the extreme. It is in the uniformity of practice and continuity of plan and its execution where they beat us. Thirty or forty years of such a system here would change the aspect of our forests. The great tracts quite recently covered by the Dutch show this conclusively. They have simply gone to work. On the German system of close and dense successional cropping, the quantity of timber on most English estates would be doubled or trebled, and in some cases quadrupled, as will hereafter be shown. The

#### ROTATION SYSTEM

followed in German forests, and on which so much depends, has been in this country confounded with the rotation of crops of different species, as in farming: whereas in Germany the period of rotation in forestry means the time one crop of trees shall occupy the ground up to the final clearing, and be followed by another not necessarily of a different species. Beech has followed Beech for generations in Germany, and so have the Firs. The final crop of Scotch or Spruce is cleared off at the end of 100 years, Beech at 125 years, and Oak at 150 years. Timber of great size is not so much aimed at. The timber is more remarkable for its length, cleanness, and the almost cylindrical shape of the trunks than anything else. The Fir deals used for flooring and other purposes are often 18 inches broad, but by far the largest proportion are 12 inches or under, such as stock private and other wood yards in England. In all the forests the trees vary in girth considerably, but as firewood has to be supplied as well as timber, the small poles and tops come in for that purpose. In the hard woods, indeed, very thick boughs, which we would here consider much too good for cordwood, are sawn and split in the woods for firewood. The oberforsters are provided with good maps of their charges, in which the compartments are numbered and described and their forest books correspond, a complete record of every transaction being kept.

It is strange that our own Government should do so much for our Indian forests and so little for those at home. Students—both English and native East Indians—are met with as pupils living with the oberforsters preparing for India. German pupils are recruited from the better classes, and are everywhere distinguished, at work or in society, by their uniforms. An oberforster's berth is a prize. At one place I visited, two young German princes were studying forestry under the oberforster. British landowners are also moving in the matter. Just previous to my visit at one place, a well-known Scottish landowner and member of the Highland Society had inspected the forests and been impressed, and others were heard of.

J. SIMPSON.  
*Gardens, Wortley Hall.*

(To be continued.)

*Vitis heterophylla variegata.*—This pretty little variegated-leaved Vine is quite distinct from any of its allies, and is a very useful plant in many ways. Though of climbing habit, it branches freely, and when employed in the flower garden, as is sometimes done, it forms quite a dense mass of foliage, whose variegation is more pronounced during bright hot summers than if the weather is

dull and wet. Under glass it may be turned account in several ways, such as draping a stage, clothing a screen, or serving to hide any tall, naked stem. I recently saw a very attractive group it employed for conservatory decoration, the plants being grown in 6-inch pots and secured a single stick about 2 feet high. As the plant branched out freely they formed very effective specimens, of a loose, graceful character a totally distinct from anything else in the structure. They had been in full leaf from April to the present time, and the foliage was as fresh and bright as ever, and would continue so for some time. The manner in which the leaves are variegated is a notable feature of this Vine, but as a rule the ground colour is green, which is mottled and marbled in different ways with white. The purplish tint of the young shoots is also very noticeable. Propagation is effected by cutting which root readily during the spring months.

#### KITCHEN GARDEN.

##### NOTES ON PEAS.

THE season, so far, has been a suitable one for garden and field Peas where conditions have been favourable, but it is doubtful whether the market grower has found them a remunerative crop when the prices received and the quantities on hand are taken into account. I am told that quite recently many sacks of Peas were lying in a provincial market at the end of the week practically without a bidder, even when offered at ruinously low prices. The worst field Peas, probably of the round variety and poor in quality. With me early and second early sorts did best; mid-season sowings for the effects of the great heat which we experienced a few weeks since. In light sandy soil the drought penetrated deeply where strawy manure was available for mulching bringing growth to a standstill; and the change from heat to a cooler atmosphere brought mildew, and thus the supply, which had been abundant, was reduced so much as to be scarcely equal to the demand. Among the early sowings, Chelsea Gem, May Queen and Veitch's Earliest Marrow did remarkably well so also did Veitch's Early Selected Round a quart of seed producing 18 pecks Peas. Stratagem is an old favourite, and this, sown at the same time as Hollow Rival, gave me the best crop of the year the latter, viewed from the end of the row presented a wondrous profusion of pods, which although not over large, are full of good-sized and well-flavoured Peas. Sutton's Empress of India is a fine-podded sort, and as showing the quality of the dry seed, slugs attacked these more severely than any other sown; indeed, the row were so thin and ragged that several had to be taken up to make up two. It was the most remarkable as seed of this sort was sown on borders some distance apart, and in each case the results were the same. Other varieties grown alongside escaped almost untouched. I do not remember a similar case when slugs discriminated so completely in the choice of Peas for attacks. Another enemy whose acquaintance I had not made until this year was the Pea weevil. I lost between weevils and slugs several long rows of Peas, notwithstanding that soot, lime and dry wood ashes were frequently sprinkled over them when in a moist state. Criterion, Mainerop and Autocrat did the best in the main-crop section. Duchess, Shropshire Hero and Prodigy became badly attacked with mildew. Duke of Albany, too, was equally bad, and neither of the four last-named will be

wn again. At Orchardleigh I saw, in July, the fine rows of the old Champion of England, the Plus Ultra and British Queen entirely free from mildew and bearing a wonderful crop. I could scarcely resist a resolution to grow these in future in spite of their height. On fresh soil British Queen had gone up to the usual height of 10 feet and the crop was proportionate.

At p. 55 "J. C." says "many people object to extra large Peas; as the majority of the new varieties are of that type, one has to go back to older sorts." This must be an isolated experience, or rather not a common one with Pea growers, for I have never yet heard or read of anyone objecting to large Peas. There is, according to my experience, a more frequent inquiry for large than medium ones, and if this were not so, the newer introductions would not find the favour they do, and it would be useless to extol the virtue of possessing large seed consumers preferred smaller Peas. What is the objection in one establishment is looked for

gardens is a step in the same direction, and is what Peas enjoy. I once had William I. nearly 8 feet high on freshly-trenched soil. I agree with "S. M." that Duke of Albany is, or has been an over-praised Pea. It is very seldom one sees a full crop of this sort, and when it happens it is very quickly over. W. S.

*Wills.*

**Pea Danby Stratagem.**—I have grown this Pea this season, and consider it a decided improvement on the original strain, good as that is. The pods are longer and the colour equally good, there being an entire absence of whitish-coloured pods, which one frequently gets in ordinary Stratagem. This percentage of light-coloured pods was the only fault that ever could be found with this noble Pea, and several good firms have done their best to rid their stock of it. The Danby selection appears to possess even a more robust constitution, the haulm being very stout and the foliage large and vigorous. Stratagem is a good dry weather Pea and suits light soil, being also much less liable to rot when sown in

Tomatoes, but if any reader is contemplating adding another variety to his list, I would advise a trial of Sensation, procuring the seed from a reliable firm. When well grown Sensation is hard to beat on the exhibition table.—GROWER.

**Rosette Colewort.**—I am glad Mr. Temple sets so much value on this grand winter vegetable. My kitchen garden is limited in extent, and I had long since given up growing many mid-winter varieties of Broccoli, as these in hard winters are so apt to collapse, and if one has not plenty of other things to fall back on there is bound to be a blank. I always plant as many Coleworts as possible, as they are a favourite vegetable in the dining-room, the flavour being simply delicious. I first learned of their extreme hardiness from an old Essex gardener, who informed me that in one terribly sharp winter, when not only all the Broccolis, but also Brussels Sprouts and Scotch Kale succumbed, the little Colewort remained practically unharmed. After that he always took care to grow large breadths.—J. CRAWFORD.

**The Carter Spinach.**—Were I confined to one variety of Spinach, I should certainly grow The Carter. In hot shallow soils it does remarkably well, the extra large sappy leaves accounting for this. In a garden not far from here, where Spinach is in great request, this sort alone is grown. The quantity of leaves which may be gathered from a fairly long row is astonishing. I feel inclined to give this variety a trial for winter, as I have several times sown the ordinary round-seeded or summer Spinach in autumn, and found it to succeed equally as well as the prickly or so-called winter variety. Perhaps the old-fashioned, smaller-leaved strains would stand a severe winter better.—A MIDLAND GROWER.

**The Celery fly.**—So far Celery plants in this district (Notts) are quite free from any attack of this pest. Not that it is too late for it to commence its work, as I have known the foliage attacked at all stages of growth. I have had to contend with it in a good many different gardens, and have never yet discovered any remedy save hand-picking. I confess this is a tedious operation, and one that is apt to be postponed, but it pays in the long run, and a handy lad can go over several long rows of plants in a day. Some gardeners dread its attacks up to the time it is fit for earthing up, but ignore it after that date. I have observed that if allowed to be badly disfigured even then, the Celery will not keep so well after.—GROWER.



In a German forest. One fall taken out, ninety years of age; elevation 2000 feet. Photograph by Mr. J. J. Simpson.

another, and no doubt this is what "J. C." means when he says many object to large Peas. No vegetable repays for fresh ground like Peas. Of this I have had convincing proof this year, both in this and other gardens. In one, about two miles distant, there is not sufficient arable ground for the earliest Peas without wanting these every alternate year, and the contrast between the produce and that grown on quite fresh soil bears no comparison. In small gardens it is difficult to keep up a constant change for Peas, and particularly does this apply to warm borders. In my own case a path border had been occupied with Strawberries three years, and was temporarily topped with early Broccoli last autumn so as to bring it into condition for early Peas. These have been much the best crop of the year. An old adage is to use the same ground for Peas once in seven years, but it rarely happens that such a long rest can be given. I think four years would make a very good limit. Where close cropping must be adopted, I believe the older kinds would give larger returns, speaking generally, than many of the newer and less robust sorts, and no doubt the Celery trench system of growing them does away with the necessity of radical changes in the ground available for Peas. Deep trenching, too, in small

the open garden in February. When sown at this date it comes on more rapidly than many of the so-called second early Peas, and forms a good succession to such as William I., &c.—J. CRAWFORD.

**Tomatoes trained up strings.**—I recently saw a large number of Tomatoes trained up stout string, the use of stakes being thus rendered unnecessary. The house was a lean-to, having a bed in the centre and a path all round. The plants were arranged so that a pathway went down between every four rows of plants, two rows of plants could then be reached, watered, tied, and the fruit gathered from either side. The cord was attached to the stout, short stick to which the plant was tied when young, and again to wires running lengthwise just under the roof glass. Thus plenty of sun and light could reach the plants. Hathaway's Excelsior was the variety grown.—J. C.

**Tomato Sensation.**—This is not a new Tomato, but it is certainly a very good one, and would please all who are fond of a medium-sized handsome-shaped fruit. The quality is also good, and no fault can be found with its bearing qualities when a light house and suitable atmosphere are given. It very much resembles a good type of the old Perfection. I have never tried it in the open air, but a gardener in Wales has had great success with it on a sunny wall. One is apt to tire of reading about so many different

CUCUMBERS FAILING.

WILL you kindly inform me through your columns what is the cause of my Cucumber plants suddenly collapsing a few days after planting, the same as enclosed specimens?—E. J.

\*\* Plants to be examined ought always to be packed in damp Moss. Those sent by "E. J." had shrivelled badly when they reached me, and the cause of failure was more difficult to determine accordingly. A disease commonly termed slime fungus sometimes attacks the stems of Cucumber, Tomato and other plants, causing a sudden collapse, but if this had been the case with those before me the stems would have been rotten rather than shrivelled. Sometimes wireworms eat their way up the stems, the flagging of the plants being the first indication of this trouble, but no wireworms had entered the stems sent by "E. J." Early this season a few of my plants collapsed similarly to those before me. They appeared all right one day and flagged badly, never to recover, the next. The underground portion of the stems had perished. Two days previously all the plants in a long house had been top-dressed with fresh compost. The compost was not warmed through prior to use. It was to the use of this cold soil that I, whether rightly or wrongly, attributed the collapse of the plants. There could not have been much wrong with the soil other than coldness, or otherwise fresh plants put out into some of the mounds would not have

grown so strongly and healthily from the first as did others in the old soil dressed with lime or else watered with well-diluted soluble phenyl. "E. J." may have given his plants a chill, watering with cold water, for instance, or he may have injured the stems by surrounding them with soil to which a strong chemical manure had been too freely added. An overdose of kaimit greatly injured a batch of plants owned by a gardening friend of mine, and a too free use of either nitrate of soda or sulphate of ammonia would prove equally injurious. Had the plants received been large enough to produce fruit, I should have expected to find either eel-worm in the roots or canker, similar to what affects Melon plants, in the stems, but am of opinion that neither of these evils was responsible for the mischief. All things considered, I think "E. J." will do well to start afresh with good, sweet, loamy compost, and if the plants are kept uniformly moist at the roots, only avoiding saturation, success will most probably reward his efforts. Cucumbers ought never to be planted in large masses of soil. Commence with small heaps and add more compost as the roots give signs of requiring more.—W. I.

**Cabbage sprouts.**—Cabbage sprouts are often invaluable in winter, affording a change in the dining-room, and are found useful even where a good breadth of Rosette Colewort is grown. The great point, however, is to select the right batch of summer Cabbage to save for sprouts. A secondary batch, or one that came into use in July, is the best for producing good succulent side growths in November and December. In any case the bed should be gone over in August, all old leaves removed and straggling stems cut back close to the ground; this applies more particularly to beds that were fit for use in May and June, and that have produced numerous smaller side Cabbages. It is astonishing what a quantity of Sprouts an ordinary-sized bed will produce later on if so treated.—C. C. D.

**French Beans in autumn.**—In the autumn when Peas and other vegetables are getting scarce Beans come in most acceptably. I am aware Peas are more plentiful in the north well into the autumn, and there may be less demand for French Beans. This year, for instance, in the south, owing to heat and drought there has been a short Pea supply, but at the time I write, the last week in July, French Beans sown to follow early Peas are doing grandly, and in many gardens with a light soil are of great value to the grower. There is no great difficulty in having dwarf Beans for a much longer period if grown specially for late supplies, and now is a good time to sow for the late lot, provided good soil and means to apply moisture exist. Late Beans having to make their growth in a short time need rich soil, and if at all dry plenty of moisture to assist rapid germination of the seed. Above all thin sowing is a necessity, as if crowded so late they fail to set. I find it best to sow at the end of July, or as early in August as possible, in short rows, as should early autumn frost follow it is a simple matter to cover at night and remove the cover in the morning. Of course when movable frames can be afforded so much the better, and in cold or northern districts a sowing may with advantage be made in cold frames for a late supply to eke out those sown in June. I have used turf pits to great advantage, covering over with thatched hurdles, and the plants bore well into the autumn at a time there was a good demand. Pits used thus come in useful later on for Lettuce, or to preserve early Broccoli or late Cauliflowers. It is well to use a quick growing kind. Syon House or Early Favourite is good for that work.

#### SHORT NOTES.—KITCHEN.

**Pea Walker's Perpetual Bearer.**—What a really first-rate long season Pea this is. It runs to about 3½ feet in height, pods abundantly, and kept hard gathered, continues to do so over a long time. It is one of the very best small garden Peas if but for

this reason. The pods are of good size, well filled, and the Peas keep tender and sweet for a long time. We have plenty of Peas carrying finer pods, but few are more generally useful.—D.

**Early fruiting Tomatoes.**—I have several varieties under trial, but the one that pleases me most is Lightning. This is not only extra early, but it is a very heavy cropper, producing as many as sixteen and eighteen fruits in a bunch. A very remarkable character in this sort is that the first bunch of fruit is formed on the point of the stem. The plant, however, quickly develops side growths below the bunch of fruit. The fruit is round and fairly handsome.—J. C. CLARKE.

#### JULY IN SOUTH DEVON.

In a sheltered garden a large plant of *Abutilon vexillarium* is now in fine bloom, its slender curving shoots being thickly strung with crimson and yellow blossoms, while hard by against a wall *Rhynchospermum jasminoides* is white with its fragrant flowers. *Achillea ptarmica* fl.-pl. The Pearl has remained in flower throughout the month, and the rose-coloured spiny globes of *Acaena microphylla* have thickly covered the dense foliage that here and there carpets the rock garden. From its shapely leaves the great *Acanthus* has reared tall spires of bloom high upon 6 feet high in a corner of the wild garden, while *Agapanthus umbellatus* and its white variety are to be found in favoured spots flowering in great clumps on the lawns. Where this fine plant does not succeed planted out, a good supply in tubs creates a wonderfully decorative effect in the garden through the summer months, as the umbels are very lasting and the tint of blue pleasing to the eye. *Anemone japonica* Honorine Jobert has already commenced its flowering period, some of the plants being considerably over 5 feet in height and covered with buds. The blooming of these autumn flowers—for the Michaelmas Daisy (*A. Amellus bessarabicus*) has opened its large purple stars, and many of the perennial Sunflowers are in bloom—gives an unwelcome hint of the passing of summer. *Antennaria margaritacea*, the "Pearly Everlasting," is pretty in masses as sometimes seen in cottage gardens, where the Sweet Williams and double Rockets have been flowering grandly. The hybrid *Alstroemerias*, with their beautiful colour gradations, were at their best at the commencement of the month, while later on *A. psittacina* and *A. aurantiaca* came into full flower. A very beautiful floral arrangement can be formed by the association of the latter flower with the Caucasian Sea Holly (*Eryngium Oliverianum*), the orange of the *Alstroemeria* and the iridescent steely blue of the *Eryngium* making a delightful contrast. The white *Antirrhinum* is still decorative in masses, especially where the seed-pods are cut off as soon as formed, and the breadths of *Aquilegia chrysantha*, though less striking than during the latter days of June, have given a pleasing note of pale saffron. The *Anthericum* have flowered through the greater part of July, and the bright Sea Pink (*Armeria bracteata rubra*) still produces its rosy flower-heads. *Anchusa italica* showed signs of waning beauty after the first week of the month, throughout which the quaint *Astrantia maxima* has been in flower. The tall feather-plumes of *Arundo conspicua*, gently swaying with every breeze, are now at their best, the beauty of some plants, however, having been marred by a torrential downpour that occurred during a thunderstorm. In dry, sunny spots

#### BABIANAS, INTAS AND SPARAXIS

have been in bloom, and the tuberous *Begonias* are week by week affording a more brilliant display. The old red Bergamot (*Monarda didyma*) has been a mass of fragrant crimson flower-heads, and its white variety has also been blooming freely, as has the less pleasing *M. birta*. The Plume Poppy (*Bocconia cordata*) has been very ornamental, growing between Bamboos to a height of nearly 8 feet, the mixture of ivory-white and burnt-almond tint of its pyramids of

inflorescence being very effective. This subject is much appreciated for indoor decoration, and the stems are cut at full length and loosely arranged in a Lucca oil jar, or other simply shaped receptacle, will be found most decorative, last a week or ten days in water. Towards the end of July the tall Chimney Campanula (*C. pyramidalis*) showed its stately beauty, and *C. carpatica*—which some strains possess much finer flow than others and *C. turbinata* expanded their fragile bells. In a rock garden before alluded to in these columns, *C. polviformis*, with its spread, pale lavender cups, was very beautiful, and both *C. Raineri* and *C. Waldsteiniana* were flowering. There also the dazzling Calandrinia *umbellata* was in bloom, as was the handsome *Callirhoe involucrata*; while in another garden *C. Papaver* was in fine flower. Some brilliant effects are now produced by the new lavender-flowered *Cannas*, the vermilion being very vivid and the yellow and orange clear. The older *iridiflora* *Ehmanni*, with its large, Musa-like leaves and pendent, rose-lake blossoms, is, however, to be despised, since to the beauty of its flower added a charm of outline far nobler than is found in the new race. Carnations have in many gardens been very good, a mass of Mrs. Reynolds Hole many feet through that I saw in mid-July creating a charming colour-effect, the plants being healthy and the individual flowers large and shapely. Sir B. Seymour (flesh-pink) appeared good for massing. In one garden, however, the old Crimson Glove was badly affected with spot. The *Centaureas* (white, purple, red) have been blossoming in the wild garden and *C. cyaneus* (the blue Cornflower) still adds valuable note of colour to the borders, while *moschata* (the Sweet Sultan) is in full bloom. A yellow variety of the latter flower contrasts admirably with the blue of the Cornflower, and a combination of the two will be found effective indoor decoration. *Celsia cretica* is a plant rare seen in gardens, but its yellow flowers are handsome, and well entitled to a place in the border. *Chelone barbata* has thrown up its tall scabrous flower-spikes, and is a decided acquisition to any sheltered nook, where the flower stems may be left unstaked, the bareness of stems rendering it difficult to afford support that is not objectionably apparent. *Chrysanthemum maximum* has commenced to flower, but is equal in beauty to the later-blooming *Pyrethrum uliginosum*, which is more valuable both for border and for indoor decoration. The handsome *Cimicifuga racemosa* has produced its white flower racemes, and is very striking when in bloom. *Coreopsis grandiflora* has been a splendor of gold throughout the entire month, and the white variety of *Cosmos bipinnatus*, with Nigella-like foliage, has been very taking. *C. matis Davidiana* and *Convolvulus encorium* are habit decidedly unlike what might be expected from their names, neither being a climber. The first is an herbaceous plant that produces small blue scented flowers at the axils of the leaves while the second is a pink-blossomed shrub. *Crinum capense* is now in bloom in some gardens. Slugs are very fond of the succulent leaves, where they are allowed to pursue their raven unchecked, soon deprive the plants of much of their decorative value. The beautiful little

#### CYPELLA HERBERTI

has been flowering on and off through the whole of the month. The individual blooms last only a day but are quickly succeeded by others, so that the flowering period is an extended one, which, apparently, will not conclude for another fortnight. Johnson's "Gardeners' Dictionary" gives the colour of the flower as vermilion, which is correct, the tint being an apricot-yellow. Through the courtesy of Mr. Archer-Hind I was enabled to inspect plates of this *Cypella* which had appeared in the *Botanical Magazine*, the *Botanical Register*, and "Sweet's," in all of which the colour is yellow. It is also known under the synonyms *Tigridia Herberti* and *Morea Herberti*. The plant in question is growing very strongly, and has been in the border for two years, and will, I trust,

andure another winter in the open. This is the first occasion of its flowering in my garden. The All blue Delphiniums were handsome at the commencement of the month, and a few large composites of *Doronicum plantagineum* Harpur-Crewe have been produced from plants whose old flower-stems have been removed. *Dianthus Napoleon* II. has retained its brilliance, but an even more vividly-hued Pink is *D. Atkinsoni*. The Sea Hollies have been most effective, their colouring being quite unique in the garden. *Eryngium methystinum*, *E. Bourgati*, and *E. Oliverianum* are all worthy of culture for garden adornment, whilst they are equally valuable for cutting. The Cactus Dahlias, though not at their best, are commencing to bloom, and very handsome are some of the flowers, many showing the true Cactus form of Juarzi, which seemed lost in subsequent productions. In a rock garden the Rocky Mountain Willow Herb (*Epilobium obcordatum*) is seen charming, while *Erigeron speciosus* and *macronatus* are blooming bravely on, and show no signs of ceasing to flower. The Globe Thistle (*Echinops Ritro*), with its blue spiky flower-heads, is now decorative in the wild garden, and the Everlasting Pea (*Lathyrus latifolius*) and its white variety garland many cottage porches with their profuse blossoming. The yellow Foxgloves have bloomed well, but lack the stately beauty of their white sisters. Anemones are in bloom, but their charm lies chiefly in the colour and contour of their leafage. *F. eboldi*, with its large, cordate, glaucous leaves, being the most valuable, while *F. grandiflora* and *F. ovata* and their variegated varieties are very generally grown. *Galega officinalis* and *G. alba* have both been covered with bloom, the plants of the latter being especially effective when associated with vividly-coloured subjects, such as *Lychnis chalcidonica* or *Gladiolus onchelyensis*. *Gaillardias* and *Gazania splendens* have been bright, and the graceful Cape Violets (*Galtonia candicans*) has borne aloft its prly bells above the blue of *Salvia patens*. Two *Antennas*, *A. asclepiadea* and *G. septemfida*, have been in bloom. I have never, as yet, seen the handsome *Gerbera Jamesoni* in flower in the open, but its large orange-scarlet blossoms are sufficiently striking to merit a trial being given to the plants in dry, sheltered positions in the south-west. *Gaura Lindheimeri* is an herbaceous plant which seldom met with in gardens, but its tall spikes of white and claret flowers are handsome, and in Devonshire, at least, it is perfectly hardy. *Gultheria procumbens* in the rock garden has produced its drooping white flowers, which ere long will give place to equally attractive berries. *Gnista schipkensis* has also been in bloom. The red-coloured *Geranium lancastriense* has been in flower and at Coombefishacre I saw the white variety of *G. sanguineum*, alluded to by Mr. Archer-Hind on page 6. Here I also saw the plant of *Ostrowskia magnifica alba* mentioned in the same note. It was out of flower, as was *Incvillea Delavayi*, but was, seemingly, in robust health and nearly 4 feet high. Although I have tended for five years I have never yet succeeded in flowering the *Ostrowskia*. Lemoine's *Gladioli* and the well-known *G. brechleyensis* are at present very handsome, several superb spikes of the latter in full bloom amongst a colony of *Yucca filamentosa*, of which many were flowering, presenting a wonderful effect in the direct contrast of brilliant scarlet with the ivory white of the Yuccas. The season has now arrived when the charming *Gypsophila paniculata*, with its billows of flower-lace, is approaching the zenith of its beauty. It is a delightful subject in the garden, but is even more in request for indoor decoration, in which it is now grown largely, its delicate rays associating with almost any form of floral arrangement and possessing the merit of retaining much of their beauty even when quite withered. Of the

#### PERENNIAL SUNFLOWERS

many are in flower, *Helianthus latiflorus*, *H. multiflorus*, *H. m. Soleil d'Or*, and *H. rigidus* amongst the number, but *H. rigidus* Miss Mellish has not as

yet unclosed a blossom. The annual Sunflowers in wayside gardens have a pleasing effect, the light, primrose-coloured variety showing off the dark disc to perfection. Many fine Hollyhocks are also to be seen in the best of health, a row of singles in full bloom that I saw the other day exhibiting no trace of disease, which, however, has appeared with almost its old virulence in some gardens. The common St. John's Wort (*Hypericum calycinum*) has covered an almost perpendicular bank, 20 yards in length, with its yellow flowers, and each year usurps a further space of stony territory. *H. olympicum* I have also seen in fine bloom. *Hemerocallis Kwanso* fl.-pl. and its variegated variety are also flowering well, in some cases growing fully 4 feet high. *Helenium pumilum* has also given its mass of bright yellow in the herbaceous border, and *Hydrangea hortensis* has commenced its season of autumnal beauty. *Indigofera floribunda* I have seen lately covered with its pink Pea-shaped blossoms, and the bed of *Jaborosa integrifolia*, alluded to in June, has produced its flowers in like profusion through July. The Ivy-leaved Pelargoniums, especially *Souvenir de C. Turner*, brighten the borders wonderfully, the brilliant Cherry-pink of the variety named showing to the best effect against a grey, stone edging. The *Kniphofias* have also thrown up their fiery flower-heads, the sulphur-coloured *K. Lachesis* being a very beautiful introduction. *Lavateras*, at the back of the borders, have blossomed profusely, and are very effective both in the garden and as cut flowers. Of Lilies, *L. candidum*, in fine form, was in bloom at the opening of the month, and *L. auratum* is better this year than for some seasons, the bulbs planted in '92 having all flowered. *L. croceum* has been over 6 feet high, while *L. pardalinum* has considerably exceeded this height. *L. canadense* and *L. superbum* have also bloomed, though not as satisfactorily as usual. *L. Humbolti* has been very beautiful, as has the brilliant vermilion *L. chalcidonicum*, while the buff-hued *L. excelsum*, or *testaceum*, has grown and flowered excellently, and towards the month's end *L. tigrinum* commenced its blossoming. The white-flowered *Linaria repens alba* is pretty on a rockery, where the yellow *Linum flavum* and the taller blue *Linum narbonneense* also flourish. The purple *Lindlofia spectabilis* is seldom grown, but is pretty when in bloom. *Lychnis chalcidonica* with its scarlet flower-heads was a brilliant sight in the early days of July, and a large-flowered variety (*L. c. grandiflora*), with blossoms 2 inches across, is a decided acquisition, while *L. diurna rosea* is still bright, and by the waterside the *Lythrums* have thrown up their bright pink flower-spikes. The green-leaved *Lobelia cardinalis* is now in flower, some time in advance of the dark-leaved variety. Two Mallows that I lately saw in flower are *M. lateritia*, bearing very beautiful blossoms of flesh-white marked with salmon-pink, and *M. Munroiana* with red flowers.

*Matthiola bicornis*, the Night-scented Stock, one of the most fragrant flowers of the garden at eventide, has also been in bloom, while long lines of *Nicotiana affinis* make the summer nights odoriferous with their delicious perfume. Many *Enocheras* have dowered the month with their beauty; *E. fruticosa*, *E. Youngi* in the earlier days, quickly followed by *E. pumila*, *E. marginata*, *E. macrocarpa*, *E. speciosa*, beautiful in the rock garden, and *E. Lamarekiana*, while *Oxalis floribunda rosea* has continued in bloom.

#### POPPIES,

though not so plentiful as in June, gave us many blossoms in July, Iceland, Oriental, Welsh, Opium, Shirley, and *P. pilosum* all contributing their quota. On the seashore the Horned Poppy (*Glaucium luteum*) made the pebbly beach beautiful with its blue-green foliage and yellow blossoms, while in the green of the growing wheat the scarlet stain of the field Poppies flamed afar. The Californian Poppy (*Romneya Coulteri*), after a mild winter, has done well in many gardens, and yesterday I saw the plant from which the photograph that appeared on p. 86 was taken, and which is now 10 feet high and blossoming finely.

*Platycodon grandiflorum* and *P. Mariesi* have flowered well, and the herbaceous *Ploxes* are this season particularly fine. Of these a careful selection should be made, as many of the colours in commerce are not calculated to beautify the garden. *Phygelius capensis* has opened its first flowers, while the *Polemoniums*, *Polygonum capitatum*, and the *Pyrethrums* are still in bloom. The single white Macartney Rose opened its first blossom on July 2, when the Musk Rose was in full beauty, while the beautiful double Brambles, pink and white, were at their loveliest towards the close of the month. *Ranunculus acris* fl. pl. is still bright, and the "Fair Maids of France" (*R. acitonifolius* fl.-pl.) did not cease their flowering till well on in July. The tall yellow *Rudbeckias* and *R. purpurea* were in bloom by mid-July, and *R. Newmani* is now entering upon its blossoming season. Of annuals the *Salpiglossis* stands pre-eminent in the wondrous shot-silk colouring of its blossoms, and when this flower is associated in the border with the gorgeous *Tigridias* the colour effect is marvellous. The light blue *Scabiosa caucasica* and the yellow *S. lutea* have both been charming, and on the rockery the purple *Scutellaria alpina* has been flowering. Many *Spiraeas* have been in bloom, fine bushes of *S. arifolia*, *S. Lindleyana* and *S. flagelliformis* having been laden with blossom, while *S. Antony Waterer*, *S. rivularis*, *S. japonica* and *S. venusta* have also been ornamental in the garden. *Solidago virgaurea nana* has come into flower, and the handsome *Stactea latifolia* is nearing perfection. *Tradescantia virginica* has not yet ceased to bloom, and the yellow *Trollius* is still bright, while the pink *Tunica Saxifraga* has been pretty on light soils. *Verbascum phoeniceum* was flowering early in the month, and the shrubby *Veronicas*, now in full bloom, are objects of beauty along the south-west coast. *V. Lyalli* has also flowered well. Of climbers, *Solanum jasminoides* is studded with white flower-clusters, and *Physianthus albens* is blossoming freely, while *Clematis*, *Jasmine* and *Tropeolum speciosum* have all their flower-wreaths on arch and wall, and the *Wistaria* has produced a second crop of pendent lilac bloom. Amongst the shrubs some of the most noticeable have been *Carpenteria californica*, *Desfontainea spinosa*, the double *Deutzia*, *Olearia Haasti*, the beautiful *Philadelphus mexicanus*, with its fragrant white-cupped blossoms, and *Rhus Cotinus* (the Venetian Sumach), with its purple feather-like inflorescence, which has earned it the title of Smoke Bush. The standard *Magnolia* is now in full bloom, and is yielding its white chalice in plenty day by day.

S. W. F.

## STOVE AND GREENHOUSE.

### RONDELETIA SPECIOSA.

Most of our beautiful old hard-wooded greenhouse plants have been put on one side to make room for quicker-growing present-day favourites, and apparently it will not be long before the majority of the stove species will be the same. This *Rondeletia* is one of the latter that I should be sorry to see the last of, but even now it is very seldom seen and presumably its extinction is only a question of time. Yet what could be brighter than a free open bush of it, covered with the vermilion and orange flowers produced in small corymbs from the tip of every shoot? There are several reputed varieties of it more or less distinct by reason either of the size or colour of the flowers; a form called *brilliantissima* I remember growing for several seasons in an East India Orchid house. The plants were often tied out into various shapes, but as trained specimens they could never be quite a success: the flowers seem to want to hang loosely to show themselves to the best advantage. Propagation of the plant is easily effected by cuttings of the young wood before it

commences to bloom, and although growth is rather slow in the earlier stages, the plants flower while still in a young state, and every season increase in vigour. The roots are very fine, like those of a Heath, consequently the potting compost must be something of the same nature and placed very firmly. It may with advantage be made a trifle richer than for the last-named plants, a good percentage of a fibrous loam being of great assistance. Drain clean pots thoroughly, and over the crocks place a layer of rough peat, making it firm with a potting stick. In repotting vigorous young plants, give a shift of about  $1\frac{1}{2}$  inches all round, and see that the compost is made firm in every part of the pot. See, too, that the plants are not dry at the root for a start, for if the old ball gets dry after potting, nothing but immersion in water for a day or two will thoroughly moisten it. Young plants from the propagating case need not be quite so firmly potted as older ones, but a smart rap on the potting bench after the soil is pressed down is advisable. All this class of plants requires very careful watering, the roots being easily damaged either by excess or scarcity of moisture. A sunny spot in a moist stove best brings out the characteristic deep green of the foliage, upon which the flowers have such a telling appearance. If carefully attended to in the first years of their life with regard to stopping, a good bushy habit is formed, and leggy old specimens—such as do so much to bring the plant into disrepute—are prevented. Feeding at the roots should be gone about with caution, or the result will be seen at the next potting time in the points of the roots. A judicious application of any good concentrated manure is of assistance, especially to old or root-bound plants.

**Plumbago capensis.**—This is well known as one of the best plants for the greenhouse, and it is also used for the flower garden with good effect. Old plants get stunted and unsightly, but if propagated annually and grown on under favourable conditions it makes a very nice pot plant, especially for autumn use. Good cuttings may generally be had in February. An old plant cut back and put into a little warmth will soon give a good supply of cuttings. Short cuttings treated similarly to those of Fuchsias will succeed well; they should be potted singly as soon as established. It may be grown in quite a cool house, but will make better progress in an intermediate temperature. Stopped as required, bushy plants are soon formed. I have had quite dwarf plants with several good heads of bloom in  $4\frac{1}{2}$ -inch pots, and when given a little artificial manure they go on flowering for a considerable time. The white variety is very pretty, but the type, I think, is the better of the two.—H.

**Swainsonia galegifolia alba.**—This is an old introduction which does not often meet with the treatment it deserves. Let go its own way, it does not make a very serviceable plant, but with a little attention it may be grown as a compact bush, and will keep up a succession of pure white blossoms for a considerable period; in fact, it may be had in flower nearly throughout the year. For autumn flowering the spring-struck cuttings will make nice plants, cuttings from plants which have been cut back and made a fresh start striking freely in the ordinary stove propagating pit or on a hotbed. They may be potted singly in a good loamy compost as soon as they are well rooted. Grown on in a cool house or pit and kept stopped from time to time until they have made bushy, compact plants, they may then be left to come into flower. As a pot plant for the cool greenhouse the Swainsonia has few rivals, as it keeps up a succession of bloom through the autumn and well-nigh through the winter. It must be grown in a cool place, as red spider being its greatest enemy, a dry atmosphere must be

avoided. In addition to being a useful pot plant, it is also valuable for cutting from. If put into water as soon as cut the flowers will last well.—A. H.

**Vallota purpurea.**—A few well-flowered examples of this afford a pleasing variety in the greenhouse at the present time. I am, however, under the impression (which is confirmed by others) that, generally speaking, the Vallotas of the present day are inferior varieties compared with those grown a generation or more ago. This is in all probability owing to the fact that large numbers are now imported every year, and though many of them die, yet some become permanently established. In these imported bulbs, as a rule, the flower-stems are taller and the segments of the bloom narrower than in the old Vallota of twenty or thirty years ago. An opinion seems very generally to prevail that the Vallota will put up with any amount of rough treatment, but that is by no means the case, and this erroneous idea is doubtless the cause of many losses. Two things in particular very detrimental to the welfare of the Vallota are over-potting and disturbing at the roots more than is absolutely necessary. The plants may be kept in good condition in the same pots for years, and consequently the soil employed should be of a lasting nature. Good fibrous yellow loam and sand, lightened if necessary by a little well-decayed leaf-mould, is a very suitable compost for the Vallota, and in such as this the roots will remain in good condition for a very long time. Imported bulbs are sometimes affected with an insect after the manner of the Eucharis mite,



*Crinum Moorei album.*

and considerable numbers have been lost in this way. By importing bulbs of the Vallota we often have them in bloom at a different time of the year from that in which we are usually accustomed to see them in flower. They generally reach this country in the summer, and if potted at once, a few may bloom in the autumn; then about the month of May many of them will, as a rule, push up their flower-spikes. A few years ago numerous examples were exhibited at the Temple show. Sometimes pink forms crop up among these imported bulbs, but they are more difficult to establish than the ordinary kinds. I have raised a considerable number of Vallota seedlings, and find that, as a rule, they grow away in a very kindly manner. The flowers, however, are not all of equal merit, and a good deal of variation exists among them. The Vallota is essentially a greenhouse plant, and a good light position, such as a shelf near the glass, suits it best.—H. P.

**Coronilla glauca.**—Since Chrysanthemums have commanded such attention some of the old-fashioned useful winter-flowering subjects have been discarded, or now receive but little notice. One of the most serviceable for either conservatory decoration or for cutting is Coronilla glauca, the value of which is greatly enhanced by its having yellow flowers, which, if we set aside Chrysanthemums, are none too common during November and December. When well grown, the deep green, dense foliage contrasts pleasingly with the bright yellow Pea-flower-shaped blossoms. A stock may soon be raised by potting several small plants into a 6-inch pot, these in a

couple of seasons forming dense flowering bushes some 3 feet in height if shifted into a 9-inch or 10-inch pot and liberally fed during the growing season. Plenty of drainage, good loam, some rotten manure, and road grit or coarse sand suit the plants well. From the commencement of June until the end of October a position in the open air suits them best, having, in fact, the same treatment in every way as Chrysanthemum. They look best when one stout stake only is inserted in the centre of the pot for support, and all outer branchlets allowed to fall down in a free and natural manner. The rich yellow blooms are then displayed to advantage. Small sprays look very cheerful arranged in glasses, and they are also very useful for dinner-table decoration. The plants will continue in good health for five or six years, after which young plants should be brought on. They will take no harm in winter if frost kept from them.—J. C.

## GARDEN FLORA.

### PLATE 1131.

#### CRINUM SANDERIANUM.

(WITH A COLOURED PLATE.\*)

THIS is one of the best of the thirty species of Crinum found in Tropical Africa and exclusive of those found at the Cape, of which there are about a dozen, the two most familiar these being C. Moorei and C. longifolium (capense). I consider C. Moorei the best of all Crinums in a garden sense, its blooms lasting exceptional long and its flowering season being the summer through. In this respect it differs from all the other species known to cultivators except C. longifolium, which is equally free flowering and lasting, but a long way inferior in beauty. C. Sanderianum was first introduced in 1884 by Messrs. F. Sander and Co., St. Albans. It is a native of the west coast of Africa, i.e., Sierra Leone, &c. Its nearest ally is C. zambanicum (Amaryllis ornata of Botanic Magazine, t. 1171), which, according to Mr. Baker, is widely spread in Tropical Africa and Tropical Africa, and which

one of the best known of tropical garden Crinum. Another near ally is C. Kirki, introduced from Kew from Zanzibar in 1879 by Sir John Kirk and a familiar plant in the houses at Kew still. C. scabrum, another African species grown in English gardens, is also nearly allied to C. Sanderianum. These are all characterized by a globose, short-necked, purple-tinged bulb long strap-shaped, bright green leaves, which are deciduous, the new leaves accompanying preceding the flower-scapes, which are stout from 1 foot to 2 feet long, with an umbel from six to twelve fragrant flowers more or less funnel-shaped, with oblong, not spreading, segments and a curved tube. In C. Sanderianum the tube is about 5 inches long, and the segments 3 inches to 4 inches by 1 inch, white with a band of bright red down the middle of each.

This and all its allies require a stove temperature, a rich loamy soil, plenty of water whilst in growth, and little, or none, whilst at rest. W. W.

**Dabœcia polifolia.**—There are few of our dwarf evergreen shrubs of which more can be said in favour than of this little ericaceous plant, hardly as the common Gorse, of neat habit, flower

\* Drawn for THE GARDEN in Messrs. Sander's nursery, St. Albans, by H. G. Moon. Lithographed and printed by J. L. Goffart.





ing freely and throughout a long season, and withal easily propagated and cultivated, it unites in itself pretty nearly all the virtues one could wish for in a hardy shrub, for its beauty is unquestionable. It is not a native of Great Britain, but is found wild in the west of Ireland, also in several parts of South-west Europe. Its small leaves, each half an inch long and narrow-ovate, which crowd the hairy stem are of a glossy and very dark green above and blue-white beneath. The raceme is erect, terminating the branches, and bears numerous drooping urn-shaped flowers. The flowers are of three different kinds: in the typical form they are purple, in flore-albo they are white, whilst a third form bears flowers both purple and white, both colours frequently occurring in the same flower. It lasts from June to September in flower, and is easily propagated by seeds.—B.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**CELERY.**—Frequent and copious waterings have been necessary to keep the plants from suffering



*Crinum capense.*

from the excessive heat and the parched state of the ground. In gardens where there is a scarcity of water, or labour to apply it, this crop will have made little progress; indeed, the plants will probably have lost their healthy green colour and have a stunted appearance. Celery is naturally a moisture-loving plant, and to obtain heads of the finest quality later on, no trouble should be spared during the present spell of dry weather to keep the roots well supplied with water. Mere dribbles once or twice a week are next to useless, and to be of any use to the plants the trenches should be almost flooded as often as possible while the dry weather lasts. Although it would be well to draw a little fresh soil round the plants if they are growing fairly well under the present circumstances, this should be confined chiefly to the early batches that will be required at the end of the present month, but mid-winter and late supplies would be better left as they are until they have had several good showers sufficient to penetrate the soil well below the roots. Where the earliest supply has not been moulded up as yet, a thorough soaking of liquid manure would prove most valuable, as it would assist rapid growth,

and result in the Celery being more crisp later on when required for use. A slight sprinkling of salt once a week and well watered in is also beneficial, and may be used as a substitute for the former where this is not at command. It is not too late to plant out a late batch, but it would not be wise to disturb the plants until we get rain, when with a few cloudy days they would soon take to the new soil, and little or no check would be experienced. In the meantime, however, the plants should not be neglected, and should be well watered as often as necessary.

**SEED-BEDS** of spring Cabbage, Lettuce, and Endive are also suffering from the dry state of the ground, and it is only by frequent waterings that the seeds will germinate and a good stock of plants be obtained. It is not altogether safe to wait for rain before sowing more seed of each, as the season may be too far gone before the plants are large enough for putting out, therefore all attention should be paid to those already sown, so that a good store of plants will be ready for putting out when the state of the weather permits. In spite of frequent waterings, the sun has such power that the young seedlings will push through the soil slowly unless a fairly shaded border was selected for forming the beds. A few

moisture as possible. As a further means of conserving this, it is a good plan to lightly tread the ground the following day, which will also make it in a better condition to receive the plants or seeds when the time arrives for putting them in.

**PEAS**, I am afraid, will have collapsed in many gardens before now where it was not possible to keep them well supplied with water, and those who were careful to trench the ground in the spring for late summer supplies will now be reaping the benefit of the extra labour then incurred. Much depends, however, on soil and locality, as, in spite of all the attention, some ground is so poor and thin that it is impossible for this crop to grow freely after a long spell of hot weather. In such cases it would be wise to pay extra attention to other things which are better able to stand dry weather, provided their roots are regularly supplied with moisture, especially in the form of liquid manure. A most important crop now for keeping up a supply until cut off by frost will be

**SCARLET RUNNERS.**—It is surprising what an amount of growth these will make when liberally supplied with manure water, even when grown on poor land. Ridges of soil should be drawn up quite 6 inches high on either side of the rows, and not less than 18 inches from the base of the plants. Place a good layer of decayed manure in the trenches thus formed, and afford a thorough soaking. A few inches of dry soil should be spread over the manure afterwards to conserve moisture, and also to be less inviting to the attack of birds. Keep the Beans gathered even though they may not be required, as their removal relieves the plants and induces them to continue flowering.

Although I have pointed out some of the drawbacks resulting from dry weather, one should not overlook the advantages, as such a season is most favourable for the destruction of weeds. All weeds that have been allowed to reach the stage when the seed is nearly ripe should be carefully pulled up and burnt at once.

RICHARD PARKER.

### FRUIT HOUSES.

**EARLY VINERIES.**—The Vines in these houses should now be in fit condition for a partial pruning in the shape of a shortening back of the laterals to about half their length. This partial pruning has a very beneficial effect, inasmuch as it not only induces the Vines to plump up their basal buds, but also assists in the early maturation of the same. Laterals which have borne bunches of Grapes will not need shortening back if a portion of each was removed when cutting the bunches. After this partial pruning has been carried out, syringing of the foliage had better be discontinued, as it might have the effect of causing premature bursting of the buds; but root waterings must not in any way be neglected, particularly if the hot weather should continue. Towards the end of the month the top-dressing of borders may be taken in hand, also such work as adding to, renovating, or making new borders. In the meantime the necessary quantities of the required materials should be prepared for forming the borders, also for the top-dressing, &c.

**MIDSEASON HOUSES.**—From many of these the crop will have been cleared, and as it is so very essential that the first leaves be preserved in good health as long as possible, they must be well washed occasionally to prevent possible attacks of red spider. The borders must also be watered whenever they approach a dry condition, and keep a fair thickness of mulching on the surface to prevent moisture evaporating too quickly. In course of time these Vines may be treated as advised above for earlier houses, the ripening of the foliage and cessation of sub-lateral growths forming a good guide as to when it may be performed. Other houses in which the Grapes are ripe must be kept shaded whenever bright to prevent the black kinds losing colour. The borders must also be kept moist, otherwise the berries will shrivel; and as an aid towards maintaining the berries in a plump condition, the internal air should be

bushy Pea sticks laid on the surface, or a Strawberry net of several thicknesses raised a few inches from the ground, will afford a certain amount of shade, as well as keep birds from doing any harm.

**DIGGING AND MANURING.**—Unless the ground has become foul and requires cleaning before a crop can be put in, I would not recommend disturbing it to any depth while the dry weather lasts, as, apart from this allowing moisture to escape, the influence of sun and wind will also exhaust much of the feeding properties contained therein. It is better to defer digging under such circumstances until the time arrives for putting in the crop, when a change for the better in the way of weather may have arrived. The same may be said in manuring land. To expose the manure by spreading it over the ground which requires digging, if only for a day, means so much loss of strength and moisture. Where it is really necessary to manure and dig ground for Cabbage or Spinach, wheel the manure in heaps and protect it from the sun with Pea haulm or some other material, working it into the trenches as the work proceeds, so that it retains as much

kept as cool as possible and the floors damped at least once a day during fine weather. Wasps, bees and flies, where numerous and troublesome, must be excluded from these houses, or they will soon work a considerable amount of mischief. The best plan is to tack muslin or netting over the ventilators, which if properly done will prevent these pests entering. This method is infinitely superior to that of enclosing the bunches in muslin bags, while the handling of the bunches, with the attendant loss of bloom consequent on the use of bags, is avoided. In lieu of this, saucers partly filled with sour beer and a few damaged berries will trap a good many, as will also the employment of the mixtures sold under the name of wasp destroyers, but absolute exclusion is the best remedy.

**MAIN-CROP MUSCATS.**—Here the Grapes will be ready for cutting, and as the supply will in many cases have to be prolonged as late as possible, steps must be taken to keep the Grapes in a sound plump condition. Aids to this end are: shading the roof during the hottest part of the day, keeping the borders quite moist, with a free circulation of dry air during fine weather, and closing the house altogether on wet days and foggy nights. Sprinkling water on the floors about the middle of the day cools the air and corrects aridity, but the moisture generated by its adoption will have evaporated long before nightfall.

**LATE MUSCATS.**—If these are on the point of colouring and the borders are in a condition to receive water, they may have a final application of artificial manure. If liquid manure is preferred, this may be used and continued some little time longer, but I do not advise its use once the Grapes commence colouring freely generally. Give every attention to air-giving making use of the front ventilators during the forenoon when colouring becomes general, and attend carefully to matters of routine, such as stopping and damping down, gradually dispensing with the latter as the berries assume an amber tint.

**LATE HAMBURGS.**—With such hot weather as we have had to contend with lately the greatest difficulty has been experienced in trying to prevent these late Hamburgs getting too advanced, and it is to be feared that in spite of shade and abundant air-giving they are in many cases in too forward a condition. There is, unfortunately, no remedy for this, and the only thing is to continue the same kind of treatment as regards shade and airing, and when finished to keep them as cool as possible, and trust that their well-ripened condition will enable their being kept as long as may be desirable. In the meantime see that the borders are kept sufficiently moist both inside and out, and if they dry up more quickly than is desirable, increase the mulch on the surface.

**EARLY PEACH HOUSE.**—The time has arrived when the consideration of such matters as lifting, top-dressing, additions to existing borders, and new borders should receive attention. In the first place, root-lifting is an excellent method of dealing with trees which make gross wood, cast their fruit, or are subject to that great evil, stone-splitting. Lifting the whole of the roots with a good ball of soil attached in bad cases, or a partial lifting in others when not of such a severe character, acts as a corrective in nine cases out of ten, and considerably prolongs their life and usefulness from a fruit-bearing point of view. Lifting must be done quickly, so that the roots are exposed to the drying influences of the outer air for as short a time as possible. Again, on the other hand, when the soil in existing borders has become partly exhausted, it is sometimes advisable to cut away the front portion to the width of 3 feet or 4 feet and to replace this with new soil, in which the roots should be carefully laid out. Top-dressing of borders is of great benefit when the trees are established and healthy, as the addition annually of a little fresh soil keeps the roots feeding up near the surface. One thing should always be observed in top-dressing, and that is to remove a certain proportion of the old

surface soil before applying the new, and the quantity of the latter should not exceed the former in bulk, otherwise the borders will become elevated above their proper level. Additions to borders are generally needed when new trees have been planted and it has not been thought necessary to make the border more than 3 feet or 4 feet wide at the outset. If the trees have done well, an addition of another 3 feet to the width of the border will be beneficial. Entirely new borders are generally required in the event of a tree dying, or when the replanting of a house with fresh trees becomes necessary, and, lastly, when planting a new house. In this latter case the borders can be made piecemeal, 3 feet or 4 feet at a time, but in the other cases the borders, as a rule, have to be constructed of full width at the outset, particularly if full-sized trees are lifted and brought in from outdoors. Such are the common reasons for lifting and border-making, and when either is necessary the materials for concreting the base, brickbats and rubble for forming the drainage, and the soil constituents for building the border with should be prepared, so that the work can be undertaken either at the end of the present month or the beginning of the next, according to the condition of the trees. In any case it should be done while the trees retain their leaves, as if these remain on but a few weeks afterwards, they greatly assist in the formation of new roots. A. W.

## FLOWER GARDEN.

### TREE LUPINES.

**CONSPICUOUS** among the flowers of June come the Lupines. Their elegant leaves, their usually good habit and their handsome spikes of pretty flowers render them welcome to nearly everyone. One never tires of the yearly display of the best varieties of *Lupinus polyphyllus*. Less enduring, but not less handsome, are the varieties of the Tree Lupine (*L. arboreus*), with their lavish display of yellow, creamy white or lilac spikes of honeyed flowers. Natives of California, these Tree Lupines seem to find our climate less congenial than that of the golden land from whence they come. They flower well for a year or two, but usually depart when we have begun to think that they mean to stay with us for many years. It may be that in their own sunny land they are not long-lived either. It may be that even there the burden of seed-bearing may be too great for longevity, but here, at least, their life is all too short. One is not disposed to attribute this short life to severe winters alone. Large plants sometimes survive a hard winter, only to succumb in a succeeding and milder one. These shrubby Lupines are not biennials, neither can we say how many years they will live. This does not appear encouraging nor likely to induce any to add the Tree Lupine to their shrubberies or borders, and yet it is so easily raised from seed or from cuttings, that there is no difficulty in retaining a stock to replace the plants we have lost. It must be some ten years or so since I bought a packet of seed, and this one introduction has never failed to give successors enough and to spare. Self-sown seedlings are produced freely and have often to be thrown or given away owing to want of space. The plants vary from seed, and where a variety which it is desired to retain appears it is well to propagate it by means of cuttings taken off immediately after flowering if the shoots are ripe enough. Of all the colours none are so much esteemed as a good bright yellow. Some of the paler shades look washed-out, and shades of lilac and blue are so plentiful among the other plants of the genus, that they are not so much appreciated in

this shrubby species. The deep, bright yellow is, on the other hand, a welcome colour, and a well-grown plant covered with its grey-green leaves almost hidden by the countless flowers is always and justly admired.

It is not difficult to find a place for the Tree Lupine. It is perhaps at its best among dark-leaved shrubs, against a hedge, or on a steep bank, where its spikes of flower will be seen to most advantage. It is not out of place in the border where, in its season, it is almost unsurpassed for profusion of bloom and its mass of colour. It likes a light soil with shelter from cold and cutting winds. With these afforded, a Tree Lupine will in its second year attain from 3 feet to even 6 feet in height, and produce an almost incredible number of spikes of flower. It does not object to pruning in spring, but, as a matter of course, this must be carefully done, or a stiff appearance will take the place of the natural grace of the bush. Seeds ought to be sown early in spring either in pots or in the open ground. The latter is the preferable course, and if possible the seeds should be sown where the plants are to flower. This will prevent any check to the growth. For cuttings, the little shoots on the main branches taken off with a heel when slightly hard at the base usually strike well if inserted in pots of sandy soil placed in a shaded greenhouse or frame. After flowering, plants in borders look a little untidy if allowed to retain all their seed-pods, and the most of these may be removed, only allowing any to remain which may be wanted to keep up the stock in case of the loss of the parent plants. The Californian Tree Lupine, in common with the other members of the genus, when shaken or touched when in seed makes a rattling noise.

Even taking into account the shortcomings or defects of the plant, the Tree Lupine is worthy of more extended cultivation than it has received during the hundred or more years it has been grown in British gardens.

S. ARNOTT.

*Carsethorn, by Dumfries, N.B.*

**Herbaceous Lobelias.**—These are exceptionally good this season, and as they are perfectly hardy with me, they rank among the most useful summer flowers. When at the end of a season any new arrangement in which they are to take part is contemplated for the following year, the old clumps are split into two, three, or four pieces, as their size allows, and replanted at once in the required site, a mulch 2 inches thick of leaf soil, or, better still, of peat moss manure if this is available following the planting. For a large bed in a prominent position let me recommend irregular clumps of *Lobelia* on a groundwork of William Niel Tufted Pansy. The colour contrast is very effective, and as this carpet plant is one of the very best of the Tufted Pansies alike for freedom and endurance, one has a very charming bed right away to the end of the season: indeed, it is at its best through August and September, when the spikes of the *Lobelia* are well developed.—B. C.

**Tufted Pansies.**—It is sometimes argued that the propagation of Tufted Pansies by offsets or division—a general break up, that is, of the old plants either in late autumn or in spring—is preferable, so far as after results are concerned, to propagation by cuttings. It may be so on some soils. It certainly is not here. Division was in the case of several varieties rendered necessary this spring on account of a failure with the cuttings, and an after comparison of the plants obtained from the two methods has consequently been afforded. There is no comparison between them; cuttings come earlier into flower, are far more vigorous, bloom with greater freedom, produce better blooms and last much longer.

have had a fine display this year on all the favourite varieties, and there has been less tendency to run out in several sorts that are, as a rule, offenders in this respect. Early in the season when there were indications of a long spell of dry weather the plants had a mulch of peat moss manure and a good soaking. This set them well on the move and was instrumental in producing a fine lot of early flowers, and just when they were showing signs of going back the heavy storm came and gave them a new lease of life. A rapid run through to remove any seed-pods and dead flowers clearly showed how quickly they picked up and started again with renewed vigour. A noteworthy point when growing them on the soil with which I have to deal is the advisability of the occasional renewal of the stock from a heavier soil. Despite dressings of road sidings and cow manure, I never get the vigorous foliage and large blooms obtained from a naturally heavy soil, except it may be in a wet summer, and then the profusion of flower is not forthcoming.—E. S.

#### CARNATION NOTES FROM WOKING.

THE cultivation of Carnations has been taken up in earnest by Mr. F. A. Wellesley only two years, but in his garden at Honeybots there is now one of the choicest collections yet got together by an amateur. About 1000 plants are grown in pots and flowered under glass, a large space being devoted to seedlings in the open border. Among the latter there are many promising kinds. Carnations bloom in the tropical sun of the past few weeks have looked anything but happy on the hot, sandy soil of this neighbourhood. Outside it seems quite impossible to cope with numberless thrips which attack them. I have had several opportunities of comparing the varieties in Mr. Wellesley's collection as well as noting his methods of culture. The young plants are kept perfectly clean throughout the winter months, at which time they occupy the stages of green-houses. This is an advantage over cold frames, because one may be working among his plants, however bad the weather. Not less than once a week each plant is examined, and if a "spotted" leaf is seen it is promptly removed. In the case of green-fly, either a dusting of tobacco powder is applied or the house is fumigated. Early in March the plants are potted into the size in which they flower. The size known as 16's, a trifle over 8 inches in diameter, is used. From two to four plants are placed in one pot, according to the strength of each variety. Several sorts of compost have been tried—loam and grit, a mixture of loam and manure, also that charged with various forms of fertilisers. Mr. Wellesley is convinced that fertilisers are not necessary and that Carnations object to high feeding. Sweet fibrous soil, with a fair proportion of rubble or gritty material, is all that is needed. The blooms resulting from such a soil are pure in colour, of good form, and most refined in their glossy texture. Self-coloured flowers appeal to me, and I will therefore mention these first. In pure white sorts there is not one to compare with Mrs. Eric Hambro. It has all the qualities of a perfect flower. Not over large—for huge Carnations become coarse—pure in colour and excellent in form and substance, it combines a most desirable habit of easy and sturdy growth. Miss Ellen Terry is a good white variety, but the blooms are too large to develop without a split calyx. This is a fault which Mr. Wellesley cannot overlook; hence many popular kinds such as the Malmaisons are not cultivated. Niphotos, again, is a nice white flower, and the plants bloom freely. Blush-white flowers are represented by Waterwitch, Her Grace and Seagull. They are all very fine. The last-named, perhaps, has the greater substance. Passing to a deeper shade, Burn Pink and Ketton Rose may be noted. These are free-flowering, useful kinds, now well known, but altogether inferior to such sorts as Exile and Braw Lass, two bright rose-coloured Carnations. Hayes' Scarlet cannot well be beaten in that shade. King Arthur has very large

blooms and is exceedingly showy. King of the Crimson is good in that colour, but by far the finest dark crimson sort is Mephisto, which is good in every way. Bendigo is a striking flower of a rich purple tint, and should be added to the choicest collections. Germania is an old kind that holds its own as a yellow, but one could wish the growth of a sturdier nature. Corinna beats it in this respect and has a nice flower. Miss Audrey Campbell is a fine yellow self. Duke of Orleans is also a showy one, but it must be placed among those that are rather large to be handsome. Among the apricot-tinted kinds there are some especially pretty flowers. Mrs. Reynolds-Hole, so generally esteemed, does not, however, compare favourably with The Pasha; this is rich and fine. Nabob is a trifle less bright, but is a charming sort. Winifred and The Hunter may also be included, the former being the better of the two. I noted Carolus Duran and was pleased, because its praises had at various times been recorded in THE GARDEN, but I am much disappointed with it. Neither in form, colour, nor growth can it be compared with any of the shade named, and I have now no wish to grow it. It may be that in the north others succeed with it.

#### YELLOW GROUND PICOETTES,

as they are called, have within recent years been very much improved. They are a delightful class of flowers, and, what is of not less importance, their growth is easy, the constitution of all those I shall name being robust. The ground colour is yellow, but varying in intensity, and the borders and flakes of rose, red, or dark crimson are produced in the flowers, in some instances slightly, in others heavy. Golden Eagle so struck me with its refined and charmingly formed blooms, that it is named first, although Mrs. Robert Sydenham is generally regarded nearest perfection in this class. Eldorado is very fine, so is Ladas. Mr. Nigel is a variety rich in its dark markings and with excellent form. Voltaire is also handsome. Cowslip is a beautiful kind, and the same remark applies to the variety Mrs. Douglas. Besides those named, Mrs. Alfred Tate, Mrs. Dranfield, Countess of Jersey, and Xerxes must be included, also Monarch, a variety that appears to be but little known. This last is a splendid flower.

Under the heading of "fancies" one may note several kinds that are certain to please most tastes. Garville Gem is one. This has slate-coloured blossoms of pretty form. Distinction is light purple, spotted with a deeper shade. Cardinal Wolsey has flowers in which a rich red accompanies yellow; this is extremely showy. So, too, is George Cruickshank, buff and red. The Dey is a most distinct kind—a combination of buff and rose.

I will not take up space by naming the various "class" flowers—the bizzares, flakes, edged Picoettes, and so on—for the reason that varieties which were the best a dozen years ago are the leading ones now. From time to time an improved form may spring up, but one might desire something of an improved growth. Compared with the varieties I have named, they are generally neither sturdy nor easy to grow, although the blossoms when at their best are beautiful. H. S.

**Pentstemons.**—The experience of the last three years has led me to place Pentstemons quite in the front rank among summer flowers, and the variety gloxinioides is exceptionally useful alike for the fine flowers produced, the many and varied shades, and the ease and rapidity with which it flowers in the one season. The seed is sown early in February in boxes, the latter being placed on the shelf of ainery just started. Old soil from the potting-bench is a capital compost alike for these and things sown at the same time, such as Carnations, Antirrhinums, Iceland Poppies, &c., and if it should be a bit on the heavy side, leaf soil and sand may be employed to make it lighter. The plants are pricked out into other boxes or into frames as soon as they can be handled, and should be grown on as quickly as possible, that is kept a bit close and receive atten-

tion in the way of judicious watering and be gradually exposed so as to secure good sturdy stuff by the beginning of May. The variety is not quite hardy. Old plants will not come safely through any but an exceptionally mild winter, or cuttings from the same unless well protected. As noted above, capital things are always obtainable from a packet of seed, but if exceptionally good forms are found, the same may be perpetuated by cuttings. To obtain a quick succession the first spike should be nipped off as soon as it shows signs of seeding. The side spikes quickly develop, and from these a goodly show is obtained until the end of the season. It is not advisable to plant too thickly, just a little daylight between the plants being conducive to sturdier growth, and where special kinds have been retained and propagated from cuttings they can be planted still more thinly on a dwarf carpet. Tufted Pansies, especially the Violetta section, are very useful for this purpose. If cuttings are not taken until the spring and there is any doubt as to the hardness of the stock, old plants can be lifted and stored in a cold frame. They will come through safely if frost is just excluded.—E. B. C.

#### NOTES ON HARDY PLANTS.

**Incarvillea Delavayi.**—Plants grown in partial shade are showing seed-pods freely, but there is no seed on fully exposed plants.

**Sidalcea malvæflora Warley Rose.**—This is decidedly a border flower to make note of. The delicate rose-coloured large flowers are freely produced, and are attractive as seen in the garden or when cut. No sticks are needed owing to the flexibility of the tall stems. I was especially struck with the rich and pleasing effect of a group of this which chanced to be close to a group in flower of *Linaria vulgaris peloria*.

**Linaria repens alba.**—This is a rare and desirable form of a species which in the type harasses many of us by its persistent running habit, and so has become a thing to despise, and yet in many places, as on dry banks and old walls, it proves an ideal plant, for there it keeps very dwarf and flowers all summer; the running roots somehow find their way along the joints of the stones both ascending and descending. There is also a delicate soft mauve-coloured variety which has occurred here, as well as one with a creamy variegation of the foliage. The white-flowered sort is the most charming, and it has all the vigour of the type, the flowers as plentiful and pure, a succession being kept up for some time. It only needs to be seen to be admired. Even if it should prove to run a great deal, we can do with broad masses of white flowers in the latter half of summer, especially in the case of a plant which does not leave any litter to detract from the effect of white flowers.

**Stobæa radula.**—There is something most attractive, to my mind, about this, in which, though a composite, the heads are neither like those of a Daisy nor a Sunflower; even the yellow is peculiar, and in a head nearly 3 inches across it need not be said that it is striking. The perfume, too, is just as singular. I should describe it as of Stockholm tar and honey, and very pleasant. I tested the plants in the severest possible way last winter for hardiness and not a plant succumbed.

**Hemerocallis aurantiaca major.**—This, no doubt, is one of the new introductions which have come to stay; the flowers are glorious in both rich colour and size, and they last longer than those of most other kinds of Day Lily; in fact, this is a good flower for many a day in moderate weather.

**Achillea eupatorium.**—How splendidly this stately old plant shows up in the border of tall things. It revels in plenty of sunshine, and this summer has attained larger dimensions in all its parts than usual, being, for instance, quite 5 feet high and topped with its big, old gold-coloured corymbs. Perhaps the most useful feature about

this plant is the great length of time the flowers last. As with many other strong growers, the better way is to transplant a few offsets every year; these attain their best form in two or three years. The big, flat corymbs may be tried for indoor use in vases. Not everyone would imagine the rich effect.

**Hypericum nummularium.**—This is one of the brightest and most pleasing of the rock garden plants. Even in the present fierce sunny and dry weather it keeps up a telling succession of bloom. I know nothing that could be more profitably planted on the score of both colour effect and season, for about this time we find we have none too many reliable plants for keeping the rock garden gay.

**Cistus alyssoides.**—This is one of the smaller-leaved species, grey, almost silvery in the foliage and very dwarf. The more conspicuous and pleasing features are the brightness of its yellow flowers and their long succession, which lasts quite six weeks in strong plants, and another good point is that you get this to quite an effective size, because it can remain for years without the necessity of lifting it in the autumn. In Yorkshire it is perfectly hardy, it having stood with me in one position for five or six years without the least protection. Stature 9 inches, habit procumbent. J. Wood.

Woodville, Kirkstall.

### IRIS MACROSIPHON.

THIS is a native of California, where it grows in company with *I. bracteata* and *I. californica*. The foliage is narrow, grass-like, about a foot long, tough, and hard to the touch. The flowers, which appear in May, are of an uncommon form, falls and standards being very long, undulated at the margin, and when opening of a bright ochraceous yellow, with a delicate network of brownish crimson. When fading they turn to creamy white and the dark network to rose. It is a very beautiful sight to see on a big plant these flowers in all the different shades. As will be seen from the photo, it is very free flowering, and, all in all, a handsome and striking plant. On one group I counted as many as seventy-three flowers open at one time, and many more to come. It is perfectly hardy, and prefers a loamy soil and a sunny and dry situation. *I. bracteata* has somewhat larger flowers of the same colour, but the network is more delicate. *I. californica*, which is new to cultivation, occurs with white, mauve, blue, violet, and lilac colours in all shades, and is also a pretty free-flowering species. MAX LEICHTLIN.

Baden-Baden.

**Hemerocallis aurantiaca** (type).—In answer to Mr. Jenkins, this was described by me in vol. viii. of the new series of the *Gardeners' Chronicle*, p. 94, from specimens now in the Kew herbarium, from a plant in full flower in Kew Gardens, July 14, 1890.—J. G. BAKER.

**Montbretias.**—The border in which my Montbretias had remained for several years having become overrun by an objectionable weed introduced by chance with a surface planting of alpine Phlox, I was obliged to make a clearance last autumn in order to get rid of the same. After carefully picking it out, some rough manure was put on and dug in deeply; holes were then made 9 inches apart and 6 inches in depth, and the best corms of the Montbretia selected and replanted, making the bottom of the hole moderately firm, so that the corm rested on a sound basis. About 2 inches of rough leaf soil were put on after the holes were filled in, and the border completed by dibbling in thickly a lot of rooted cuttings of the Phlox, that forms an admirable carpet to the Montbretia. The Montbretia has benefited greatly from the lifting and replanting, and as

there was no check this spring to growth, flower-spikes were early and are very fine. The fact that the several side-sprays springing from the centre spike are much later in opening has a tendency to greatly prolong the season, and the display on such a border is of several weeks' duration. There are few more charming combinations for large vases than well-grown spikes of Montbretia rising out of a groundwork of Gypsophila, and I can recommend these to the notice of all gardeners who have to supply an abundance of cut flowers.—C. P. S.

### CARNATIONS AT MONTAGUE NURSERY, TOTTENHAM.

It is not yet a decade since Mr. F. Gifford made a beginning in the above nursery for the express purpose of growing the border Carnations, and by raising some thousands of seedlings each year to endeavour also to raise the standard of excellence in these all-increasing popular summer flowers. He has been very successful, particularly in the high standard that now prevails in nearly all sections of the flower. For proof of this we have but to examine the thousands of seedlings that are

sure to appear from time to time. All this rigid selection of the best and most worthy from all points cannot fail to be esteemed by those amateurs who make a leading feature of these plants, particularly for the open garden, where only the hardiest and most vigorous types are sure of making a display worthy the plants themselves.

In these respects Mr. Gifford's collection is noteworthy, from the fact that the whole of the plants are grown in the open ground, and in a soil, by the way, that does not impress one at the first view. But soil that is light and somewhat stony is eminently fitted for the Carnation in winter, and if to this be added the gentle slope of the nursery itself, we imagine that not a few would like such a garden for the purpose. And whatever first impressions to the contrary one may get, all such must be quickly dispelled, not only by the general vigour of the thousands of plants in the collection here, but also of the seedlings. One point in particular to which Mr. Gifford attaches importance is height, so that the flowers may suffer the less from pelting rains. A thunderstorm the day previous to our visit had ruined all the flowers within 12 inches of the earth, while the taller sorts were free. Quite a large number

of the kinds grown here are seedlings of Mr. Gifford's raising—a fact that speaks well for the excellence of his strain. Of the latter, the beds of seedlings also testify largely, there being about a dozen beds some 60 feet long filled with the plants. The whole of the named collection, for convenience of layering and otherwise, is in narrow beds or lines, and in this way all the kinds are readily inspected. Some of the more prominent of recent novelties are W. J. Fish, a most brilliant scarlet, a great advance on King of Scarlets and non-bursting. Lord Leighton is also fine, possessing the same blush tint as Waterwitch, but said to be an improvement upon it in the open. It is certainly a very fine flower. Lady Cook—a clear soft yellow, with faint, bright scarlet edge—is charming, and with its sweet perfume and symmetrical blossoms most telling. Hodgson Pratt, a crimson-scarlet, with bars of a deeper shade, is a handsome and full flower and of fine habit; while Frederic Harrison, near by, strikes one by its deep golden and almost globular flowers, that are slightly



*Iris macrosiphon.* From a photograph sent by Herr Max Leichtlin, Baden-Baden.

flowering at the present moment, and though constantly halting to remark this or that fine form or colour, to find less than 5 per cent. marked as worth retaining. This does not, however, prove the inferiority of the strain, but just the reverse, and the more so in a collection so rich and varied as here obtains. A dozen years ago, perhaps 90 per cent. of the double Carnations, which, by the way, are mainly of self colour, now in flower here would have been selected as improvements on existing kinds to be sent forth with glowing descriptions, but now next to useless when they appear in competition with the best things in any good collection. And what must undoubtedly appeal to many as so much waste time in the raising and proving of all these seedlings year by year is but the florist's own exacting ideas of what this or that flower must be. For, be it remembered, the florist himself fixes the standard to be achieved; next, he achieves it invariably to his complete satisfaction, and then, espousing further possible grounds for improvement, again commences on the self-imposed task and accomplishes this also. And so on by degrees and with years, till now, in many classes at least, further improvement appears well-nigh impossible. To the florist, however, the latter word is unknown, as unexpected breaks and new shades of colour are

edged carmine. This is one of the fancy sorts that are becoming popular. Another splendid thing is Andrew Noble, rosy salmon in colour and among the most handsome; the petal is very fine and the flower full. Wanda, Clive Brook, Donnybrook, Gordon Stables and Joe Willett are all scarlets of very high order that cannot fail to satisfy the most exacting, while J. R. Lowell, Laureate and John Davidson represent those of salmon shades, the last with powerful clove fragrance also. Bret Harte is a handsome crimson of intense hue, as vigorous in growth as it is free and fragrant of blossom.

White-flowered kinds are especially good, and among these Wilfred Laurier is conspicuous in the novelties; this is of the purest, and possesses finely-formed petals and full flowers as well as a vigorous constitution. Especially good is Edith Leadenham, of rather taller growth, but its erect, free-branching character is seen above all else in the pure white mass of its flowers. Even here in the open sharing with the veriest weeds the great parching heat and heavy, pelting storms of rain and hail this splendid-habited plant was but little worse. Other whites are Mrs. Gifford, with large flaky blossoms of immense size and beautifully fragrant and free. Mrs. Eric Hambro and Miss Ellen Terry are both first-rate. Sigard is best

described as Mrs. R. Hole improved, and W. M. Thomson, apricot-bud, heavily marked with red-dish scarlet, is a very attractive flower. Pelham is a mixture of dark and bright crimson, and Sarasate is scarlet with crimson stripes with fine habit. Mrs. C. W. Townley is also a striking flower and freely produced; it is margined and flaked with crimson on white ground. Apart from these, the most of which have been raised by Mr. Gifford, are to be found the choicest of those raised by Mr. Martin Smith and other well-known specialists of the flower. The whole collection is grown without the least protection, and the abundance of fine vigorous grass that is being put down gives the most satisfying evidences for success next year.

**Iceland Poppies.** To appreciate the beauties of these they want to be seen in large patches. Such patches present to view hundreds of blossoms, white, yellow, and orange-scarlet. A more beautiful or useful group of perennial Poppies can scarcely be imagined, and if the seeds be sown in March and the seedlings carefully looked after they will bloom the same season. The blossoms, extremely bright and showy, are borne on slender stems about a foot in height, and if cut in a young state they are very useful for table decoration and are much employed for the purpose. The orange-scarlet form known as *Miniatur* is inclined to be sportive, but a considerable percentage of the seedlings will come true to character.—R. D.

**Annual Xeranthemums.**—The double purple and the double white varieties make charming subjects to cut from. In a good and airy light soil they grow to a height of about 2 feet and bloom with remarkable freedom. There is a rose-tinted variety also which it is thought originated from the purple, but it does not always come true. In addition to their value in the garden, the Xeranthemums are useful Everastings, and, as in the case of the Helichrysum, the flower-stems should be cut when the flowers are about half expanded, the stems tied together at the ends, and then hung up in a dry, cool place, where they become rigid and the flowers fully expand. The flowers come in very useful for home decoration at Christmas. The seeds can be sown and the plants allowed to stand where they are to bloom.—R. D.

## ORCHARD AND FRUIT GARDEN.

### FRUIT-TREE BUDDING.

WILL you tell me when and how to do fruit-tree budding, as unfortunately I have been unsuccessful in my previous attempts, chiefly, I fancy, from my ignorance when the buds to be inserted are in their best condition?—A NOVICE.

\*\*\* July and August are the months in which fruit-tree budding is most successfully carried out. The operation is no more difficult than that of budding dwarf Roses, and is performed in much the same manner. Buds may then be inserted in firm young shoots, as in the case of budding standard Roses, in the stems of young suckers layered, or on seedling stocks in the same way as *Manetti* Rose stocks are budded. Although nurserymen persevere with this delicate work in hot weather such as I have lately experienced with satisfactory results, amateurs are advised to select, as far as possible, a dull, showery weather for budding. It is of importance (1) that the stocks run freely, the bark not clinging to the wood when opened; (2) that the bark to which buds are attached parts readily from the wood, and (3) that the buds selected are suitable for the purpose. Where only a few dozen or scores of stocks are budded, the sap can be sent up into the wood by freely

watering the ground about them, budding taking place a day or two later. The buds can be detached from the wood with a minimum amount of trouble when the trees from which the shoots are cut are kept moist at the roots, while the most suitable buds are obtained from about the middle portion of strong (not gross) well-matured shoots, those near the base being too ripe, and those nearer the points of the shoots immature. If the buds are obtained from a distance, the shoots to which they are attached should be lightly topped, have the leaves shortened to near the footstalks, and be packed in damp Moss. Those cut from home-grown trees ought also to have their leaves reduced to one quarter their original proportions, and be kept in a can of water till they are done with, buds dragged from shrivelled wood seldom if ever "taking." Before describing the operation of budding something more must be said about the stocks. A judicious selection and careful preparation of these contribute largely to ultimate success. If large trees of Apples are desired, the stock selected is the natural or Crab stock, but more precocious, if smaller, trees can be had by budding on the surface-rooting *Doncin*, English and Broad-leaved Paradise stocks. The wild Pear is the best stock for choice Pears if large trees are wanted, while smaller, quick-bearing trees result from budding on the Quince stock. Apricots are principally budded on the Mussel Plum stock, the *St. Julien* Plum being recommended as a stock for Peaches and Nectarines in preference to the Almond stock. For choice Plums, the *St. Julien*, *Mussel*, and *Myrobalan* Plum stocks are recommended, though both these, Apricots, Peaches and Nectarines are frequently budded on ordinary Plum sucker growths duly prepared for the purpose, and to the use of which much of the trouble with suckering growths may be attributed. Cherries are budded on both the wild Cherry and the common dwarf species, the former imparting the most vigour to the scion.

Stocks transplanted last autumn or spring ought to be fit for budding this season. A single bud should be inserted in each stem if comparatively young, but the lateral growths or larger older stocks may also be budded; also young growths on large trained or other trees the characters of which it is desirable should be changed, or for the purpose of testing either seedlings or novelties quickly. There ought not to be a great difference between the age of the wood to be budded and that from which the buds are taken. The buds are in their best condition when about half ripe and plumped up. It is just possible "A Novice" failed to distinguish between wood buds and fruit buds. Only the former are suitable. They differ from fruit buds in that they are longer and more pointed, fruit buds being, as a rule, round and somewhat flattened. In the case of stone fruits (Apricots, Plums, Peaches, Nectarines and Cherries), medium-sized shoots frequently produce triple buds, the central one of these being a wood bud, and these buds may be used accordingly. Some few Apples, *Bismarck* in particular, frequently form twin buds, one wood and the other a flower bud, and thousands of newly-budded stocks have actually produced a fruit and a strong wood growth during the summer following budding. Neither single-stemmed stocks to be budded near the ground nor lateral growths to be budded similar to *Briers* should be headed down, but they may be cleared of spray and lightly topped. Nothing should be done to force the buds into growth this season. If they did start, the growth would be feeble; whereas if they

become well attached to the wood this summer, heading down the stocks or shortening lateral growths in the autumn or winter to near the bud, long and strong shoots will be pushed out next summer.

The operation of budding is delicate, yet simple. The wood with buds attached should be in a can or bucket of water close at hand. A sharp budding knife and raffia for tying, together with good stocks, are all the accessories needed. First prepare the bud. With the knife cut off a thin slice of bark and wood  $1\frac{1}{2}$  inches long, commencing at the lower side and having the bud in the centre. With the handle of the knife remove the wood, commencing this time from the upper end. If this is successfully done there will be no hollow eye in the bud, but if the eye is open, owing to the pith coming away with the wood, a vacuum would be formed and the inserted bud would perish. When ready keep the shield with bud on the tongue till wanted for insertion. In a clear portion of stem or lateral growth, as the case may be, make the usual cuts in the form of a T and raise the bark carefully, commencing at the angles on both sides. The shield with the bud facing upward in upright stocks, but outward in lateral growths, should be inserted under the bark, the footstalk of bud coming in handy for pushing it down, and when in position only the thin bruised end of shield should protrude. Cut this off so that the top of the shield of bark fits tightly (butts against) the top of the cross cut or top bar of the T cut and see that it does not shift when bound up, as it is there where the union most quickly takes place. Bind up with either raffia or worsted, taking care not to unduly press against the bud. If the leaf footstalk connected with the bud remains fresh and green a week or more, the bud is all right, but if it shrivels during the next day or two the chances are the bud has not taken, and if the season is not too far advanced, a second bud on the opposite side of the stem may be inserted. Nurserymen usually commence budding Cherries first, following with Apricots, then Plums, Apples and Pears, with Peaches and Nectarines last. "A Novice" ought to commence operations at once.—W. I.

### A BATCH OF NEW STRAWBERRIES.

WE have had several of late and still they come, and so long as the new are different, or better in season, size, colour or quality than the old, the more the better. The cry is also raised that some of the old sorts are getting worn out, and that new varieties are needed to take the place of such as *Keens' Seedling*, *Elton*, *British Queen* and *Sir Joseph Paxton*. Be that as it may, Messrs. Laxton, of Bedford, are doing their best to supply all our wants. Take four of their recent novelties—*Early Laxton*, *Monarch*, *Royal Sovereign* and *Latest of All*. Of these four, *Royal Sovereign* promises to become as popular as *Keens' Seedling*, and here in Edinburgh we have Mr. Carmichael offering four new Strawberries. These are the *Prince* and *Princess of Wales*, *Queen of Denmark* and *Richard Gilbert*. These almost cover the Strawberry season from first to last. *Veitch's Perfection* is also rapidly establishing itself in public favour, while Mr. Allan's earlier seedlings, *Gunton Park* and *Lord Sutfield*, are taking higher rank in private gardens and being grown for market. Mr. Allan does not believe in finality in the improvement of Strawberries, hence he exhibited another novelty (*Lady Sutfield*) at the great show at Norwich the other week, where it obtained a first-class certificate. This is a cross between *Lord Sutfield* and *Empress of India*. In flesh, flavour, colour and aroma *Lady Sutfield* is the most unique Strawberry I have yet eaten. The flesh is also firm and of a dark crimson colour throughout.

Several new Strawberries have also recently been before the Scottish Horticultural Association at their recent meetings. Thomas Carlyle, a cross between Garibaldi and Dr. Hogg, has the fine habit and enormous fertility of the former, with a dash of the superior flavour of Dr. Hogg. It is also as early as V. H. de Thury, and seems to continue longer in bearing. W. E. Gladstone was shown by James Grieve and Sons, of the Redbraes Nurseries, Edinburgh, who hold the stock of this large fine-looking Strawberry. In certain parts Elton is still grown as one of the most profitable and popular late Strawberries. In others, Frogmore Late Pine is run abreast of Waterloo, Lord Suffield, and Latest of All. With all our additions, however, some of the older sorts hold the field, V. H. de Thury being still the most popular Strawberry north of the Tweed, and Paxton south. Royal Sovereign is making rapid progress alike in Scotland and England. It will be several years before it assumes the place or area devoted to these two popular favourites. Fruit growers and consumers are, in fact, so intensely critical as well as conservative, that there is no danger of being overrun too rapidly with novelties, however meritorious. The difficulty and danger are all the other way, as those find to their cost who try to place a distinct Strawberry like Waterloo on our markets.

D. T. F.

### RASPBERRIES.

THE Raspberry is one of the few fruits that travel badly, and each district has, therefore, to grow enough for local use. Fortunately, the Raspberry is by no means fastidious as to soil if only there is depth enough to afford a sufficiency of food and moisture during the time the fruit is swelling and ripening. Even when the soil is shallow, resting on a hot or gravelly subsoil, the plants can frequently be kept in a healthy, productive state by means of heavy mulchings of strawy manure, these keeping the ground cool and moist. Raspberries are also liable to fail early on heavy, badly-drained soil. On a moderately deep, fertile, loamy soil the plantations can be kept much longer in a profitable condition, but, as a rule, fresh plantations should be made every few years, these taking the place of those showing signs of failure. It is worthy of note that when Raspberries are planted among standard fruit trees, all growing up together, they succeed well for a considerable number of years, the partial shade afforded by the fruit trees benefiting the Raspberries rather than otherwise. It is not to be expected, however, that planting among fruit trees after the latter have grown to a large size will turn out so satisfactorily. On the contrary, comparatively puny canes result from this planting on ground already exhausted of much that makes it fertile, and the shade is also too dense. There should, however, be no digging in of manure among the lines of canes, as this means the wholesale destruction of many fibrous roots with which the surface soil ought to be crowded. Hoe and rake off weeds, if need be, and then mulch heavily with either strawy manure, peat Moss litter (using this less freely), spent hops, spent tanner's bark, or decaying leaves. Anything of a very forcing nature ought not to be used other than sparingly. For instance, it would be a mistake to mulch with kiln-dust or charred Barley sprouts obtained from maltings. A free application, or enough to act as a mulch, once, to my knowledge, had the effect of forcing young Raspberry canes to a height of 9 feet, and their owner was very proud of them. It proved the ruin of the plantation, the plants not being equal to the strain of producing a crop in the following year or of forming good serviceable canes. Neither nitrate of soda nor sulphate of ammonia ought to be used heavily by way of manure, as these

also are liable to force the young canes into undue luxuriance. One part of either of these nitrogenous manures ought to be sufficient for mixing with two parts each of kainit or other potash salts and superphosphate of lime, applying the mixture in February, March, or early in April at the rate of 3 oz. to the square yard. Liquid manure may be applied with advantage to poor, well-drained soils during the winter and early spring months, and where solid and other manures are but sparingly used, liberal

market-grower's fashion (that is to say, without supports of any kind), should be shortened and laid in at least of three different lengths, the smallest of those reserved at the preliminary thinning being the hardest cut. Shorten the latter to a length of 18 inches, leaving others to from 30 inches to 3 feet in length, and in the case of the taller growers the strongest cane may be left to a length of 5 feet or rather less. In this way perfect columns, fences, or hedge

of fruiting growths are had, and a greater weight of fruit obtained than by shortening and training in the common fashion. It is true some what hard pruning is apt to favour sucker growth from the roots, varieties of medium height being particularly liable to produce far more sucker growths than desirable. This may to a certain extent be checked by either hoeing or hand-pulling those left in the rows near to the old canes, requiring to be timely and freely thinned out. The must be no hesitation about pruning newly planted canes. Unpruned or only lightly shortened canes may and do produce fruit, but it is usually of an inferior character, comparatively worthless, added to which the plant will be exhausted in the attempt, and form young canes worthy of the name. Cut them down to within 6 inches of the ground, and if they were properly planted all will push up strong young canes equal to bearing fruit next year. In this way the foundation of profitable rows of plantations of Raspberries will have been laid. New planted canes should be mulched, as owing not having had time to send their "anchor" roots down deeply into the soil drought will quickly afflict them. They ought further to be assisted by watering during dry, hot weather.

### VARIETIES.

Reference has been made to the market-grower's plan of growing Raspberries without stakes, but it must be remembered that the



*Carter's Prolific Raspberry.*

applications are of great assistance when the crops are swelling.

There has hitherto been too much rule-of-thumb business in the matter of

### PRUNING AND TRAINING

Raspberries. We are too fond of shortening all the reserved canes to one height, and, as a consequence, there are usually thickets of fruiting shoots at the tops of the stakes or fences and few lower down. The canes, whether trained to single stakes, fences, or espaliers formed with either wires or stakes, or grown

Beehive or Fastolf and any other tall-growing variety is unsuitable for this method of culture. If these were grown without support they would have to be arranged in rows not less than 5 feet apart, and even at this distance they would sprawl badly. As it happens, the growers can be wholly dispensed with, as there are at least four good varieties that are suitable for the purpose. One of the best of these is

CARTER'S PROLIFIC, a good illustration of which accompanies these notes. This deservedly popular variety attains a height of about 4 feet, and may be shortened to 3 feet, and the sturdy canes

en remain nearly or quite erect. It is a heavy cropper, and the fruits are large, firm in flesh, deep red in colour, and of excellent flavour. In BARMFORTH'S SEEDLING we have a good companion for Carter's Prolific, this also forming a sturdy, somewhat branching canes, which are rarely injured by frosts. When the ripened canes are shortened somewhat severely this induces an extra early strong growth of young canes, many of which produce fruit freely in the autumn. The fruits are large, firm in texture, dark red in colour, and richly flavoured. This and the foregoing variety are good travellers, and among the best to send to a distance for dessert. HORNET belongs to the same category.

SUPERLATIVE is intermediate between the medium and tall growers, and is suitable for either training to stakes and espaliers or for the market-grower's method of growing, the sturdy canes when shortened moderately hard standing well without supports. It is a heavy cropper, and has large, rich red, finely-flavoured fruit.

FASTOLF, an old favourite, is not generally reliable, and, in my opinion, is inferior to Northumbrian Fillbasket. K.

#### PLANTING OF GLASSHOUSES IN MARKET GARDENS.

In the case of *Smith v. Richmond*, surveyor of taxes, before Mr. Justice Collins and Mr. Justice Kelly, sitting in the Queen's Bench Division, was of considerable importance to market gardeners. His case was stated by the quarter sessions for West Sussex on an appeal by the overseers of the parish of Worthing from a decision of the assessment committee of the union of East Preston under the Agricultural Rates Act, 1896 (59 and 60 Vict., c. 16). The case raised a question as to the rating of glasshouses over market gardens. By section 1 of the Agricultural Rates Act, 1896, "the occupier of agricultural land in England is made liable, in the case of every rate to which the Act applies, to pay one-half only of the rate in the land payable in respect of buildings or other hereditaments." The facts were as follows: Robert Piper was a grower of fruit, vegetables and flowers at Worthing, and described himself as was commonly known as a market gardener and nurseryman. He was the owner and occupier of land rather more than four acres in extent, on which fifty-seven glasshouses or greenhouses of various sizes were erected. The houses were used by the appellant for the purpose of growing tomatoes, Cucumbers and Grapes, and to a smaller extent other vegetables, for the purposes of sale. The plants and crops grown therein were watered and heated by artificial means, and grown on soil placed upon prepared beds inside the houses, and matured much earlier than in the open ground. The Vines are planted inside the houses, and the roots run partly in the soil under the houses and partly pass through apertures in the walls into the soil outside. Fifty-one of the glasshouses are thus used for growing Vines. Of the Cucumber houses (which are six out of the fifty-seven houses) there are inside the houses dwarf brick walls supporting corrugated iron sheets, upon which sheets earth taken from the other parts of the nursery ground is placed. In this earth so placed upon the iron sheets the Cucumber plants are planted. Beneath the iron sheets and between them and the ground there are hot-water pipes. The area actually occupied by the fifty-seven houses is rather more than two acres. The rest (rather more than two acres) consists merely of Vine borders, paths and the like-holes. The whole of the houses are built upon dwarf brick walls like an ordinary greenhouse. It is provided by section 9 of the Act that "the expression 'agricultural land' means any land used as arable, meadow or pasture ground only, cottage gardens exceeding one quarter of an acre, market gardens, nursery grounds, orchards or allotments, but does not include land occupied, together with a house as a park, gardens other than as aforesaid, pleasure

grounds, or any land kept or preserved mainly or exclusively for purposes of sport or recreation, or land used as a racecourse." For the purposes of the Act section 6 (1) requires certain returns to be made to the Local Government Board. In pursuance of subsection (3) the Local Government Board by the Agricultural Rates Order, 1896, have made regulations. By Article IV. the overseers are to serve to the assessment committee and the surveyor of taxes a return showing, as regards each hereditament separately valued in the Valuation List, which is partly buildings and partly agricultural land, the gross estimated rental and rateable value of the parts not being agricultural land. In this case the overseers returned Mr. Piper's property as agricultural land. The assessment committee, however, on the objection of the surveyor of taxes, decided that the statement, to the extent to which it includes land partly covered with glasshouses, was incorrect, and corrected it by striking out that entry.

Upon the hearing of the appeal before the quarter sessions it was contended for the appellants the overseers that the particulars of the gross estimated rental and the rateable value of the hereditaments in question were correctly entered by them in their statement under the heading of "agricultural land," and that the decision of the assessment committee to correct the statement by striking out the entry was wrong, and in support of their contention they cited the case of "*Purser v. Local Board for Worthing*" (18 Q.B.D., 818). For the respondent it was contended that the case relied on by the appellants did not decide that the glasshouses were not buildings, but merely that the land was not the less used as a market garden because the glasshouse had been placed upon it, and that, moreover, the definition of agricultural land in the Agricultural Rates Act, 1896, was to be read subject to the context, and that the context in the Act required that any buildings should be excluded from the term agricultural land, that the glasshouses were buildings within the meaning of the Act, and that it followed that either the whole of the hereditaments in question should be excluded from the overseers' statement, or, alternately, that so much thereof as consisted of buildings should be inserted under the heading of "buildings not being agricultural land." The quarter sessions were of opinion that the contention of the appellants was right, and allowed the appeal, and ordered the statement of the overseers to be altered by restoring all the items which formed the subject of the appeal to the condition in which they were before they were altered by the assessment committee, subject to the statement of a case for the opinion of the Court. The following section of the Act in question, 59 and 60 Vict., c. 16, is material: 5. (c) Where any hereditaments consist partly of agricultural land and partly of buildings, the gross estimated rental of the buildings when valued separately, in pursuance of this Act, from the agricultural land shall, while the buildings are used only for the cultivation of the said land, be calculated, not on structural cost, but on the rent at which they would be expected to let to a tenant from year to year if they could be so used. The Attorney-General (Sir Richard Webster, Q.C.), Mr. Day, and Mr. Trevor appeared for the surveyor of taxes; Mr. Joseph Walton, Q.C., and Mr. Clavell Salter for the overseers; and Mr. A. Glen for the occupier. The Attorney-General said this was a test case of importance. The distinction drawn in the Act was between land and buildings and not between buildings and agricultural buildings. The buildings here should be liable to the full rate. The case relied on by the overseers was on another Act. Greenhouses in a cottage garden were fully rateable. The question was not one of assessment; it was whether the buildings had to pay half rates or whole rates. There were no buildings of any kind in the Act which had only to pay half rates. He referred to "*Purser v. Local Board of Worthing*" (18 Q.B.D., 818), "London and North-Western Railway v. Llandudno Improvement Commissioners" (1897, 1 Q.B., 287). The strip where the Vines grow

might, perhaps, be treated as agricultural land. Mr. Joseph Walton said section 1 of the Act was the guiding section. In that agricultural land was defined as meaning, *inter alia*, market gardens. The land here was market garden. It was therefore only liable to half rates. He would admit for the purpose of this case that a building which was not part of the garden even though in the garden was not to have the benefit of the exemption. But anything that was garden was entitled to exemption. Section 5 (c) had really very little to do with the matter; it only related to the mode in which buildings—not agricultural land—were to be rated. Mr. A. Glen's appearance on behalf of the occupier was under the Agricultural Rates Order, Article IX., rule 3. The Attorney-General took the objection that that rule, which permitted the occupier to appear at quarter sessions, did not authorise him to argue here, especially after the argument for the overseers. Mr. Glen cited "*Re Justices of Montgomeryshire*" (44 L.T., 310; 50 L.J., Mc. 52), and said that this was the appeal. It would be ridiculous if the party interested could not appear here. His client certainly was the party interested. The Court, after some consideration, thought he was entitled to argue for his client. Mr. Glen continued the arguments for a short time. He said it was begging the question to rely on section 5 (c).

The Court in the result disagreed, but Mr. Justice Ridley, according to the usual practice, withdrew his judgment, with the result that Mr. Justice Collins's judgment in favour of the market gardener prevailed. Mr. Justice Collins said: This case raises a question whether glasshouses used in a market garden and constituting in themselves market gardens are entitled to secure the benefit attached to agricultural land in the Act of 1896. The quarter session, overruling the decision of the assessment committee, held that glasshouses were not buildings within the Act, and against that decision the appeal came to this court. His Lordship then read the first section of the Act, providing for the occupier of agricultural land paying one-half only of the rate payable in respect of buildings and other hereditaments, and section 9 defining agricultural land as including market gardens, and continued: It follows from this definition that if the structures in this case are market gardens they are entitled to exemption. Is this, then, a market garden? His Lordship read the facts as set out in the case, and continued: From the above it appears that one-half of the property was covered with glass buildings. Was that hereditament a market garden? A great deal of light is thrown on the matter by the case of "*Purser v. Local Board for Worthing*" (18 Q.B.D., 818). On the authority of that case it is clear that this property is not hindered from being a market garden by reason of its being covered with glass. Up to that point, then, this is a market garden. The Attorney-General, however, pressed some arguments based on the provisions of sections 5 (c) and 6 (2), which sections, he said, had the effect of excluding any buildings from the benefits attaching to agricultural land. The cardinal point in the Act being the distinction between buildings and land, I do not, however, consider that well founded. So far as buildings are concerned, the object of section 5 is to give them a qualified exemption. It then goes on to buildings "used only for the cultivation of the said land," and gives them a qualified exemption, which explains why the distinction is drawn between agricultural land and buildings. In the section market gardens and buildings are mutually exclusive, as it deals with buildings excluded out of agricultural land. Therefore, when once I arrive at the conclusion that the premises in question are market garden I am not pressed by the provisions as to buildings, because they are excluded out of agricultural land. The other case cited strengthens the views that the platform and roof over a railway line were held to be part of the railway, and the distinction was drawn between the line and buildings ancillary thereto. When, as here, the

structures are part and parcel of the market garden the exemption applies, and you have to get them out of the category of market gardens before the provisions as to buildings apply. Any other view would defeat the object of the Act. The Legislature had swept "market gardens" into the category of agricultural land. It must have been known to the Legislature that they were oftentimes covered with glass. I think, therefore, that the buildings in question are to be regarded as part of the market garden, and are only liable to half the rates. Mr. Justice Ridley said he differed with diffidence, but felt bound to state the opinion he had arrived at. The whole scope of the Act was to relieve agricultural land. See the preamble, sections 1, 5, 6, and the definition clause 9. Occupiers of agricultural land were to pay only half the rates charged on buildings and other hereditaments. The object evinced by those and other sections was to contrast the land with the buildings. In the Act no buildings were entitled to the same relief as the agricultural land. As to them the law remained as before, except in respect to the buildings in section 5 (c). It was not likely that it entered into the mind of the draftsman that buildings would stand on the very land which was being cultivated. Such buildings were none the less buildings because they did so. Those market gardeners who were wealthy enough to erect glass-houses all over the land were not the class of persons for whose relief the Act could have been intended. — *Times*.

## SOCIETIES AND EXHIBITIONS.

### THE MIDLAND CARNATION AND PICOTEE SOCIETY.

AUGUST 5 AND 6.

THE annual exhibition of this society took place in the Botanic Gardens, Edgbaston, Birmingham, on the 5th and 6th inst., and proved a great surprise, for the extent and quality of the blooms staged were much beyond what could have been expected, as it was feared that the hot weather of the previous few days would have seriously affected them. The midland show was in remarkable contrast to that held in London a short time ago. In the light and airy exhibition house of the Botanic Gardens the blooms could be arranged to considerable advantage; the light was excellent and the convenience for seeing much better. The weather was favourable, and a supplementary exhibition was provided in the various plant houses by the curator, Mr. W. B. Litham, the flowering houses being especially gay with subjects of a very high order of merit. The yellow Carnations Germania and the dark maroon Uriah Pike, both grown in pots, were really superb. Fuchsias formed an excellent background to the Carnations on the exhibition stages, and in one part a magnificent specimen of *Bougainvillea glabra* trained to the roof overshadowed a considerable number of the cut flowers.

There is no large class at Birmingham for Carnations as in London; a twelve stand is the largest, and in the class for this number of Carnations blooms Mr. J. Edwards, Blackley, Manchester, was first, having J. S. Hedderly, James Douglas, Mrs. Rowan, Robert Houlgrave, Sportsman, Sarah Payne (this fine old variety being shown in good character), Master Fred, Ellis Crossley, Lord Salisbury, Edward Rowan, Mrs. Gunn, and Joseph Lakin. Mr. T. Lord, florist, Todmorden, was awarded the second prize, and Mr. Robert Sydenham the third, both with very good blooms. Out of seventeen entries for six Carnations fourteen were staged. Mr. C. F. Thurstan, Wolverhampton, taking the first prize with charming blooms of Edward Adams, William Skirving, George Melville, Flamingo, Robert Houlgrave, and Crista-galli. Mr. A. R. Brown, Handsworth, was second, and Mr. J. W. Bentley, Stakehill, Birmingham, third. The white ground Picotees were, as they always are, very attractive from their softness and delicacy, and always

command considerable attention. They offer sharp contrasts in the breadth as well as in the bands of colour round the petal edges. The best twelve blooms came from Mr. R. Sydenham, these consisting of Ganymede, Mrs. Payne, Clio, Jessie, Pride of Leyton, Muriel, Esther, Favourite, Thomas William, Little Phil, Somerhill, and Scarlet Queen. Mr. T. Lord, Todmorden, was second, having most of the foregoing varieties. The best six, a superb half dozen, came from Mr. A. W. Jones, Handsworth, who grows in a district surrounded by chemical and other works, where the atmosphere is decidedly impure. He had Little Phil, Muriel, Mrs. Openshaw, Madeline, Somerhill, and Heart's Delight. Mr. T. W. Goodfellow, Walsall, was second. The growing popularity of the yellow grounds and fancy varieties was seen in the number of stands of twelve blooms staged and in their size and beauty. Mr. A. W. Jones, who makes a speciality of these and the white ground Picotees, was first with superb blooms of Voltaire, The Gift, The Dey, Cardinal Wolsey, George Cruickshank, Xerxes, Harlequin, Eldorado, Golden Eagle, Ladas, Mrs. R. Sydenham, and Mrs. Nigel, a very good representative collection. Mr. R. Sydenham was second with flowers only just inferior, among them Yellow Hammer, Monarch, Virgo, London, and May Queen. Mr. A. R. Brown was third. There were fifteen exhibitors of six blooms, Mr. C. Thurstan taking the first prize with fine blooms of Eldorado, Yellow Hammer, Golden Eagle, Voltaire, Mrs. Douglas, and Cardinal Wolsey.

In the class for six blooms of yellow ground Picotees, Mr. A. W. Jones was again first with Voltaire, The Gift, May Queen, Golden Eagle, Xerxes and Mrs. R. Sydenham. Messrs. Thomson and Co. were second, they having, different from the foregoing, Eldorado, Ladas, and Mrs. Douglas. The selfs were also very fine, and in the class for twelve varieties twelve dozen blooms were staged. Mr. A. R. Brown was first; he had Britannia, Little John, Mrs. Eric Hambro, Bendigo, one of the best purple selfs; Braw Lass, Her Grace, blush, a beautiful variety; Hayes' Scarlet, Germania, Royal Purple, Lady M. Currie, Nabob and Topsy. Mr. R. Sydenham took the second prize and Messrs. Thomson and Co. the third. There were fourteen collections of six selfs. Mr. A. W. Jones was first with Fiery Cross, Britannia, Mrs. E. Hambro, Seagull, Miss A. Campbell and Germania. Four classes were set apart for single blooms of Carnations and Picotees of the different sections in twelves and sixes, occupying certain allotted spaces, a large table being filled with them, only a limited amount of dressing being permitted. The blooms staged were mostly seedlings and very few were named. The spaces allowed were not large enough; consequently the flowers were crowded and the best among them did not show themselves off to the best advantage, while a good many of a somewhat poor character were staged. There were also several classes for border Carnations shown in trusses of three or five. Exhibits were numerous, but few really good. There was indeed so much of an inferior character, that some modification of these classes appears necessary to prevent this. There were also classes for single blooms in the various sections of Carnations and Picotees, and a great many were staged. Such classes have an interest for experts more than for the general public. Carnations in pots were also shown in two classes.

Shower bouquets formed of Carnations and suitable foliage—of which there were several exhibits—formed a very pleasing feature. That shown by Mr. C. Blick (gardener to Mr. Martin R. Smith, Hayes) was made up of pale rose and yellow ground Carnations in a highly artistic manner, suitable foliage being employed. Mr. W. F. Gunn, of Nottingham, came second with one made up entirely of white Carnations and foliage. Soft-tinted Carnations were mainly employed in all cases. Sprays and button-holes made of Carnations are pretty certain to be of a somewhat formal character.

Floral arrangements on tables 6 feet by 3 brought seven competitors, Carnation blooms only being allowed, but any kind of suitable foliage could be employed. The first prize was to Miss E. Mayell, Acocks Green, pink and light colours predominating. As is usual, there were centre and two side pieces, with a few appropriate small vases in suitable places. Miss Sydenham, of Birmingham, was second, and Miss A. Kemp, Edgbaston, third. All were very pretty, in one or two cases dark flowers were used with excellent effect. Epergnes of Sweet Peas were numerous and good, some very pretty arrangements being staged, soft tints generally prevailing, though here and there a few dark varieties were judiciously intermingled. Miss A. G. Kemp was first and Miss Lovatt second. Evidently, epergne means any centre-piece, as interpreted at Birmingham.

Prizes were offered in two classes for Sweet Peas in bunches: in that for nine distinct varieties there were sixteen entries, and in that for two bunches, competing for special prizes offered by Mr. H. Eckford, there were five entries. Most of the bunches were arranged in glass vases with suitable foliage, and they formed a very pleasing feature. Some of the most striking varieties were Emily Eckford, New Countess, Blue Burpee, Stanley, Aurora, Her Majesty, Victoria, Countess of Radnor, Royal Robe, and Princess Wales. There were also classes for twelve bunches of herbaceous perennials, Mr. John Walker, taking the first prize. Owing to the hot weather the exhibits were very few and the flowers not their best.

The society's challenge cup was won outright by Mr. R. Sydenham, and the Turner Memorial cup by Mr. A. W. Jones.

Miscellaneous exhibits were of an interesting character. Mr. J. H. White, nurseryman, Worcester, was awarded the Botanic Society's silver medal for a superb bank of hardy and flowers. Silver medals were awarded to Messrs. T. Hewitt and Co., Solihull, for a collection of plants and cut flowers, Carnations predominant to Mr. B. R. Davis, Yeovil, for brilliant Bego of fine quality; to Messrs. W. and J. Birkenhead, Sale, for a fine and interesting collection of Ferns and to Mr. Henry Eckford for a large collection of Sweet Peas. A bronze medal was awarded Mr. W. F. Gunn, Nottingham, for a collection of hardy flowers.

### ROYAL HORTICULTURAL SOCIETY.

AUGUST 10.

THOUGH in point of number of exhibits the meeting on the above date was perhaps the smallest of the present year, there was certainly no lack of interesting subjects, especially for the outside garden. Hardy plants, indeed, were the most conspicuous as well as the most interesting feature of this meeting. Of more than usual interest—though perhaps crowded somewhat owing to want of room—was the collection of autumn flowers from Messrs. James Veitch and Sons. This array of beautiful and easily-grown plants attracted considerable attention, so replete was it with the good things this class comprises. The same firm also exhibited one of their usual highly interesting groups of flowering shrubs that invariably interest quite a large number. From Langport Messrs. Kelway brought a group of cut Gladioli, many of them very good, though scarcely up to the standard of excellence at the previous meeting. It is, however, with regard to that we note a departure in the mode of exhibiting these flowers; and in place of the simple, almost natural arrangement so closely associated with these flowers for many years past, the firm in question had nailed them fan-shaped on to baize-covered hoardings—a method for which we have not the least sympathy. A great deal of the beauty of the fine spikes was lost by the half-circular arrangement to which we refer. Trevor Lawrence had a group of Cannas cut for the open, also fine spikes of Gladioli and a pure white form of *Crinum Powellii*. Dahl

very good and in considerable quantity also. Apples, as usual at this season, were not numerous. Some good Apples were also counted, but other fruits were the reverse of abundant.

### Orchid Committee.

Awards of merit were given to the following:—

**ODONTOGLOSSUM PESCATOREI HARRISIANUM.**—A lovely form with a large branching spike of twenty-flowers. The sepals are white, slightly suffused with rose, and thickly spotted at the base with rose purple; the petals white, the centre of the basal half thickly spotted with purple as in the sepals, the lip white, shading to yellow and thickly covered with rich purple at the base. It is very much in the way of the lovely *O. P. Vichi*, but distinct from that variety. From Messrs. J. Veitch and Sons.

**LALIO-CATTLEYA ELEGANS SCHROEDERIANA.**—A good form. The sepals and petals rich crimson-purple, the lip rich velvety crimson with numerous raised lines, the side lobes deep purple, shading to rose at the base. A cut spike of four flowers was exhibited by Mr. E. Ashworth, Hefield Hall.

**ANDROPHUM VICTORIA REGINA.**—In the fine variety of this shown the sepals and petals, each about 1 inch in length, are pale violet-blue, veined with a darker shade of colour at the apical half and white at the base. The lip is rich violet, shading to white at the base, where there are numerous pale lines. From Mr. T. Statter.

**CYPRIPEDIUM CALLO-ROTHSCHILDIANUM.**—A hybrid derived from the species indicated in the name. The dorsal sepal is pale green, heavily veined with dark brown, the petals greenish white, thickly covered with large purple-brown spots; the lip rich brown, veined with a darker shade of colour. The plant bore two flowers on the spike. From Mr. J. Gurney-Fowler, Giebelands, South Woodford.

Messrs. H. Low and Co. sent a neat and pretty group, prominent among which were some grand forms of *Oncidium Papilio*, well-flowered plants of *O. Jonesianum*, and several fine forms of *O. Laccanum*. Among the numerous *Cattleyas* were good forms of *C. Warscewiczii*, *C. Gaskelliana*, *C. Loddigesii*, and a good form of *C. bicolor*. *Odontoglossum crispum* was represented by a good form with white sepals and petals, the sepals spotted with reddish brown, the lip white shading to yellow, and having a large brown blotch in the centre. *O. Pescatorei* was represented by a grand form, with rich purple spots on the edges of the lip. *Cypripediums* (both hybrids and species) were extensively shown, the most prominent being finely-flowered *C. Charlesworthii*, a good form of *C. macropterum*, *C. Canhamianum* and *C. oenanthem superbum*. A bronze Banksian medal was awarded. Messrs. J. Veitch and Sons, Ltd., sent five hybrid *Cattleyas*. Two good forms of *L. C. Atalanta* and a grand form of *L. C. callistoglossa ignescens* (*L. purpurata* × *C. Warscewiczii*), the sepals and petals deep rose, the lip rich crimson-purple, shading to rich orange-yellow in the throat, were also shown. Messrs. F. Sander and Co. sent some dwarf forms of *Sobralia xantholeuca*, *S. leifordii*, a dark form of the *S. maeranthana* section, a fine specimen *Odontoglossum bicornis album* with six spikes of flower, a grand plant of *O. Schleiperianum*, *O. Kramerianum*, *O. Pescatorei* var. *conspicuum*, a beautiful form with pure white sepals, lip white, thickly covered with deep purple, and *Cypripedium Lawrence-Druryi*, a new hybrid derived from the parents indicated in the name.

Mr. J. Gurney-Fowler sent *Cypripedium Neptunea* (var. *lorandae* × *Rothschildianum*), the dorsal sepal pale green, spotted with dark brown, the petals pale green, thickly spotted with dark brown and heavily suffused with purple hairs on the outer edge, the lip purple-brown, shading to pale green. *C. A. de Laurence* (*Curtisi* × *Rothschildianum*) is very similar to the above, but with less density in the markings. *C. Massaianum* (super-

cilare × *Rothschildianum*) is much larger than the two above referred to, the ground colour being pale green and the markings more regular. It had previously been certificated. A fine branching spike of the lovely *Renanthera Storei* was also included. Mr. R. J. Measures sent a fine form of *Lalio-Cattleya Andreana* (*C. bicolor* × *L. elegans*), the sepals and petals pale rose, the lip intermediate in character between the two species, the front rich purple, shading to pale rose at the base. Mr. Reginald Young, Liverpool, sent *Cypripedium Eyermani* var. *Hermione*. Mr. G. W. Law-Schofield sent *Lalio-Cattleya elegans* (New Hall variety), sepals and petals deep rose, with a rich crimson-purple lip, shading to rose on the side lobes. Sir T. Lawrence sent a finely-grown and flowered plant of *Platyclinis filiformis*, showing some scores of spikes of its rich golden flowers, a finely-grown plant of *Masdevallia infracta purpurea* and the lovely terrestrial Orchid, *Eulophia guineensis*, the sepals and petals rich purple, margined with rose, the broad lip pale rose shading to white at the base, and veined with a deeper rose in the centre. The erect spike carried eighteen flowers. Sir F. Wigan, Clare Lawn, East Sheen, sent a grand variety of *Lalio-Cattleya elegans*, four spikes being cut from one plant, a good form of *Lelia crispa* and *Masdevallia macrura*. Mr. W. H. Lumsden, Aberdeen, sent *Cypripedium Balmedianum*. It has a great deal of the *C. Stonei* in it, but no traces of the other parent, *C. Fairieanum*, could be discovered. It is very much in the way of *C. Numa*.

### Floral Committee.

First-class certificates were granted to the following:—

**CALCEOLARIA ALBA.**—A lovely Chilean species, with white blossoms of medium size and produced in the greatest profusion. The plants were splendidly grown, and not only displayed high cultivation, but also revealed the value of the species for greenhouse decoration. The plant is so nearly hardy, that it deserves to be freely grown for its value in the garden or for cutting. A coloured plate of this species was given in THE GARDEN, January 23, 1897 (page 60). From Mr. J. T. Bennett-Poë, Cheshunt.

**NYMPHLEA MARLIACEA FLAMMEA.**—One of the beautiful *Marliacea* hybrids, with reddish crimson flowers. A splendid addition to these things. From Mr. J. T. Bennett-Poë.

**CRINUM POWELLI ALBUM.**—Two giant spikes of this newly hardy species, with a dozen or more blossoms on each umbel, were shown. Individually the blossoms are very large, and the stems attaining to 3 feet high render it a bold and conspicuous object in the garden, where a sheltered spot should be given it. From Sir Trevor Lawrence (gardener, Mr. Bain).

Awards of merit were recommended to:—

**RUDBECKIA LACINIATA GOLDEN GLOW.**—A showy and useful new plant, with blossoms like those of a medium-sized Sunflower, but requiring the highest culture to attain perfection. From Mr. M. Prichard, Christchurch; also Messrs. Barr and Sons and Messrs. Kelway and Sons.

**HOLLYHOCK LEANDER.**—A bronzy yellow, with large, double, well-formed flowers. From Messrs. Webb and Brand, Saffron Walden.

**GLADIOLUS COUNTESS AMY.**—Warm purple with a white base. Messrs. Kelway and Sons.

**GLADIOLUS MIKE LAMBOURNE.**—A rich deep crimson-maroon, flowers very large. Messrs. Kelway and Sons.

**GLADIOLUS COUNTESS OF LEICESTER.**—White, striped lilac-purple, and streaked with scarlet. Messrs. Kelway and Sons.

**DAHLIA DAFFODIL.**—A Cactus kind, with medium-sized blossoms of a clear yellow shade. From Mr. James Stredwick, St. Leonards.

**DAHLIA MISS AGNES BOX.**—Also of the Cactus type, and of a fine rich crimson. From Mr. James Stredwick.

**PHLOX EUGENIE DAUZANVILLIERS.**—A soft lilac-blue shade with white centre. Kelway and Sons.

**PHLOX LA MATILDE.**—A fine, handsome form with purplish blossoms. From Mr. T. S. Ware, Tottenham.

**VERBENA TRESSERVE.**—Of a clear rose-scarlet shade with white-shaded centre, flowers and truss of large size. Mr. J. T. Bennett-Poë.

One of the most interesting features of this meeting was the large array of annuals from Messrs. James Veitch and Sons, in a cut state for the most part, and comprising the leading families and varieties in these all-important summer flowers. This was an interesting as well as fresh and bright-looking exhibit (silver-gilt Banksian). From Langport, Messrs. Kelway and Sons brought a most extensive display of *Gladioli* arranged in fan-shaped design on boards as noted above. A few of the best and most distinct apart from those that received certificates of merit were Mrs. Langtry, Empress of India, Duke of Buccleuch, a most beautiful shade of salmon-pink; Cardinal Newman, Henry Irving, yellow flushed scarlet; Chopin, Shazada and others. The same firm also had an assortment of *Gaillardias* and other hardy things, for which a silver-gilt Banksian was awarded. From Tottenham Mr. T. S. Ware brought a varied lot of the best hardy flowers in season, mainly in bold telling bunches on long stems. Prominent among these were *Echinacea purpurea*, a very fine form of this almost unique plant; *Veronica longifolia subsessilis*, *Scabiosa caucasica*, *Pentstemon glaber*, very beautiful in the azure tint of its flowers; *P. barbatus Torreyi*, *Hyacinthus candicans*, with snowy drooping bells; *Campanula Van Houttei*, a fine Bellflower too rarely seen; *Statice latifolia*, the best of the hardy sorts; *Campanula G. F. Wilson*, *C. Hendersoni*, a really good plant, forming a perfect cushion when growing freely; *Lilium tigrinum* and others (silver Flora medal). Another very beautiful lot of hardy flowers was that from Mr. M. Prichard, Christchurch, Hants. Mr. Prichard's group contained several fine bunches of the newer kinds of *Montbretias*, together with handsome flowers of *Scabiosa caucasica alba*, the flowers finer and decidedly purer than any we have yet seen and of especial value for cutting. *Phloxes* of several kinds, *Ball of Fire* and *Etna* being especially good; *Cimicifuga cordifolia*, with erect, compact spikes of creamy-white flowers; *Echinops Ritro*, with globular heads of steel blue; the pure white *Everlasting Pea*, *Dianthus Atkinsoni* and *Delphinium Zalil* with pale yellow blossoms, though unfortunately not a good do r, were also noteworthy. Very conspicuous was Mr. Prichard's lot was a Mexican Thistle (*Erythrolena conspicua*), said to be a grand thing for the wild garden, and having a much-forked inflorescence and purplish-magenta flowers, as far as could be seen by the unopened buds. Unfortunately, the plant was drooping, and, being cut, failed to satisfy the committee. Such plants, indeed, if worth exhibiting at all, are well worth showing as growing, so that a fair estimate may be obtained of their worth (silver Flora medal). Cactus and other Dahlias were very fine from Mr. S. Mortimer, Farnham, particularly the former, the best of these being *Starfish*, *Matchless*, *Princess Ena*, *Countess Radnor*, *Bertha Mawley*, and *Mrs. Francis Fell*. Among the show and fancy kinds, Mrs. Saunders, Glowworm, Harrison Weir, Duchess of York, Mrs. Gladstone, John Keynes, and *Sunset* were notable (silver Flora medal). Another collection of Dahlias came from Mr. J. Walker, Thame, Cactus and show kinds being about equally represented and in capital form, the varieties not differing materially from those in the previous group; a silver Banksian medal was awarded. A small group of *Marigolds* from Messrs. Dobbie and Co. received a bronze Banksian medal, the varieties being *Lemon Queen* and *Prince of Orange*. From the garden of Sir Trevor Lawrence (gardener, Mr. Bain) came a fine batch of *Cannas* from the open ground, also *Gladioli*. Among the latter was one named *G. A. King*, a large spreading flower of purple-crimson hue, lower petals white, with numerous dots. In the same group, *Lobelia Crimson Gem* and *L. Carmine Gem* were exceedingly fine, as also the lovely spikes of *Crinum Powelli album*, already

referred to, the group receiving a silver Banksian medal. As usual, a very interesting batch of hardy flowers came from Messrs. Barr and Sons, Covent Garden, the major portion comprising Phloxes and Delphiniums. Of the former we noted *Etna*, *Embarrassment*, *W. Robinson*, a pale salmon shade, with flowers of large size; *Diadem*, *Parachute*, and others. The blue and white forms of *Agapanthus* were also noted, together with *Rudbeckias*, *Helianthus*, *Montbretia crocosmiiflora*, very fine; *Lilium auratum rubro-vittatum*, and others. There was also a good assortment of *Gladioli*, and not least among these the fiery-scarlet spikes of *G. brenehleyensis*, for which a silver Banksian medal was awarded.

Messrs. Wallace and Co., of Colchester, had a very beautiful lot of *Liliums*, principally of the speciosum group. In this lot crowding had been entirely ignored, the intervening spaces being filled with *Asparagus* growths that materially assisted to a light arrangement. Indeed, in view of the taste displayed, as also the material used, we are inclined to regard it as one of the best groups at this meeting, and deserving greater distinction. The *Liliums* included of speciosum varieties *Melpomene*, the pure white *Krätzeri*, and *album novum*, the best of this class, together with a specimen in a pot of the latter with five stems. There were also *L. superbum*, *tigrinum* in several varieties, the lovely *L. Henryi* in plenty, as also *L. auratum*, together with *L. a. platyphyllum* and the massive pure white *L. a. platyphyllum virginale*. At the one end was a group of some half dozen of the newer *Montbretias* in variety with *Gladioli* at the other, and, towering above all, the noble spikes of *Kniphofia nobilis*, perhaps the grandest of all the set. A silver Banksian medal was awarded. For a group of *Cannas* in variety, with occasional pots of *Lilium nepalense* and *L. Wallichianum*, Messrs. Hugh Low and Co. also received a silver Banksian medal.

The Messrs. Veitch and Sons had a series of flowering shrubs, the most worthy being *Clerodendron trichotomum*, *Coprosma acerosa*, with bluish and almost transparent berries, like a gooseberry in miniature; *Hypericum aseylon*, some 4 feet high, with heads of yellow blossom; *H. floribundum*, a bushy kind, with numerous golden flowers; *Colutea arborescens* and its variety *purpurea*, *Abelia rupestris*, *Rhus glabra laciniata*, and *Ptelea trifoliata*. From Stevenage Messrs. A. W. Young and Co. brought bunches, said to be cut from the open ground, of *Pelargonium King of Denmark*.

#### Fruit Committee.

There was only a limited number of exhibits, but these were mostly good.

Awards of merit were given to the following:—

**GOOSEBERRY GOLDEN GEM.**—A seedling, the parents being *Antagonist* and *Whitesmith*. It is of excellent flavour, the flesh rich and sweet, skin thin, bright golden. It is an erect grower and very heavy cropper. From Messrs. Veitch, Ltd., Chelsea.

**BLACKBERRY THE KITTATINNY.**—An American variety. The fruit is sweet and freely produced. Growths from 5 feet to 6 feet, laden with berries quite ripe, were sent. It requires a damp, heavy soil. From Mr. Wadds, Cliveden Gardens, Maidenhead.

Messrs. G. Bunyard & Co., the Nurseries, Maidstone, sent thirty-six dishes of early Apples, some remarkable fruits being staged for so early in the season; some kinds, such as *Lady Sudeley*, *Cardinal*, *Oker*, and others, had no doubt been at some period under glass. Mr. Gladstone, *Qurrenden*, and *Red Juneating* were remarkable for their splendid colour. There were some very fine cooking fruits, the best being *Grenadier*, *Sugar Loaf*, *Lord Suffield*, *Domino*, *Gold Medal*, *Stirling Castle*, *Lord Grosvenor*, *Potts' Seedling*, *Golden Spire* and *Ecklinville*. Some good Peaches were staged, *Early York*, *Early Grosse Mignonne*, and *Hale's Early* being the best, with good *Hemskirk*, *Blenheim*, *Moorpark*, and the *Peach Apricots* (silver Knightian medal). Mr. Miller, gardener to Lord Foley, Ruxley Lodge, Esher,

sent eighteen dishes of fruit, including *Brown Turkey* and *Brunswick Figs*, *Royal George*, *Violette Hâtive*, *Noblesse*, and *Alexander Peaches*, *Hemskirk Apricots*, *W. Tillery Melon*, *Apples*, *Mulberries*, *Cherries*, *Gooseberries*, and two varieties of *Grapes* (silver Banksian medal). A grand box of *Royal George Peaches* came from Mr. Kelf, gardener to Mrs. Abbot, South Villa, Regent's Park, well meriting the cultural commendation bestowed on them, the fruits being large and of grand colour. Mr. Wadds, Cliveden Gardens, sent *Blackberry Wilson Junior*. Not a single Melon was staged on this occasion for certificate. A Tomato named *Sutton Beauty*, a distinct fruit of medium size, was sent by Mr. J. Moody, Sutton House Gardens. It was asked to be sent to Chiswick for trial. Mr. Smyth, The Gardens, Basing Park, Alton, sent two distinct types of dwarf French Beans. One was a very prolific variety, a cross between *Smyth's Seedling* and the *Scarlet Runner*, with long, straight pods, the growth about 2 feet. It is a promising variety, and was asked to be sent to Chiswick for trial. The other was very dwarf and named *Goliath*, but not considered so good. Mr. Wythes, Syon House Gardens, Brentford, sent *Lady Sudeley Apple* and *Jargonelle Pear* for the Veitch prizes for flavour. The second prize in each case was awarded.

A meeting was held at the society's gardens, Chiswick, on the 5th inst., when a good number of early varieties of Potatoes were examined. Some nine varieties were good as far as cropping was concerned, but only one satisfied the committee when cooked. The Tomatoes were next gone through, but not considered forward enough for classification. Some Aubergines from Dr. Bonavia were next examined. These were considered good. Some new Vegetable Marrows from Constantinople, sent by Mr. Toogood, Southampton, were not considered equal in quality to our own well-known varieties.

An award of merit was given to—

**POTATO SUTTON'S HARBINGER.**—This is a very heavy cropper and very early. It was obtained by crossing *Early Regent* and *Pillbasket*. It has white flesh, shallow eyes, roundish tubers, strong haulm, and is an excellent cooking variety, being floury and of superb flavour. From Messrs. Sutton and Sons, Reading.

## PUBLIC GARDENS.

**The opening of Kew Gardens.**—The Director of Kew Gardens has written the following letter to Mr. E. S. Payne, a member of the Hampstead Vestry, with reference to the earlier opening of Kew Gardens to the public:—"Royal Gardens, Kew, August 3, 1897. Dear Sir,—Kew is open in the morning to those who wish to examine the collection for any definite purpose, and facilities are given to them which could not be extended in the presence of the general public. The privilege is largely used. It is admitted that with an earlier hour of opening to the general public the existing arrangement would virtually come to an end. This would be a serious deduction to the public utility of the establishment. The question then arises whether the public demand for an earlier hour of opening is sufficiently definite to justify the sacrifice. In my opinion it is not. The number of visitors who enter the gardens between noon and 2 p.m. is annually very small—only a few hundreds. Kew is, in fact, an afternoon place, and as our average totals have now risen to a million and a quarter, or one out of every four of the population of London, Kew does not hide its light under a bushel, and I am satisfied that the public generally is satisfied with things as they are. The administrative difficulties in making a change in so complicated an establishment are very considerable. My mind is, however, open on the subject; but I want more definite evidence than is at present forthcoming that any definite change is really demanded.

## OBITUARY.

### MR. ALFRED SUTTON.

WE regret to announce the death, at the age of 79, of Mr. Alfred Sutton, at his residence at Reading on Saturday morning, August 7. Both Mr. Alfred Sutton and Mr. Martin Hop Sutton, his elder brother, who founded the firm and who survives him, retired from business in 1888, making over the business to the sons, the present partners. Mr. Alfred Sutton took principally what may be termed the home part of the work. Mr. Sutton took the deeper interest in education, and was a member of the Reading School Board for fifteen years. The British School and other scholastic institutions had in him a warm supporter. He was also a liberal subscriber to all institutions having for their object the relief of distress and suffering. In thrift societies, too, Mr. Sutton was much interested, and he rendered valuable help in the management of the Reading Savings Bank. A religious movements, especially those established for the benefit of young men, were dear to him. His widow and ten children (seven sons and three daughters) survive him.

**The weather in West Herts.**—A very hot week, the highest temperature in shade exceeding 80° on four days, while on two of these days the readings were respectively 84 and 86°, both which are the highest shade temperatures recorded here during the present summer. The nights, on the other hand, were only moderate warm for the time of the year, so that the range in temperature has been very great, and on several occasions exceeded 30°. The temperature of the ground at 2 feet deep is now 5° and 1 foot deep 8° warmer than is seasonable. For more than three weeks no measurable quantity rain-water has come through either of the percolation gauges, and none at all for nearly a week. Throughout the last five days the record of bright sunshine has averaged about 11½ hours a day. July proved unusually warm. In fact, in the eleven years there have been only two Julys as high a mean temperature, viz., those of 18 and 1896. It was also extremely dry. Rain fell on but five days, and to the total depth of only about half an inch, making this the driest July in Berkhamssted for twelve years. The sun shone on an average for 8 hours a day, which, with one exception (1887), is the highest record for a July during the same twelve years.—E. A. Berkhamssted, August 7.

—The past week has again proved very warm, making this the seventh unseasonably warm week we have now had in succession. On the 5th the reading in shade rose to 86°, but since then the days have been much cooler. On the other hand, the nights were warmer than in the preceding week. The ground temperatures still remain very high, being at 2 feet deep 5°, and 1 foot deep 6°, above the August averages at these depths. Rain fell on only two days of the week, and to the total depth of but little more than a quarter of an inch. The air was, as a rule, very dry, and the record of bright sunshine remarkably good.—E. M., Berkhamssted.

### BOOKS RECEIVED.

"Shade Temperature." By Edward Mawley.  
"Hand-List of Tender Monocotyledons, excluding Orchideæ grown in the Royal Gardens, Kew." 188 Eyre and Spottiswoode.

**Month's numbers of The Garden (48th subscriber of Nearly Thirty Years).**—The July number which is published at the beginning of July, can only contain the numbers for June.

**Names of plants.**—*J. G. Squibbs*.—*Calyspteryx hederacea* fl.-pl.—*E. Baddeley*.—1, *Vanda cœrulea*, 2, *Phalaenopsis amabilis*. Both remarkably good forms more particularly the *Vanda*.—*W. Shaw*.—1, *Kentia japonica*; 5, *Olearia Haasti*; 6, *Hypericum calycinum*; 8, *Picea nobilis*; 9, the *Tamarisk*; 10, *Geranium Andrei*. Please send better specimens of others.

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## ORCHIDS.

### RODRIGUEZIA SECUNDA.

Not so small, and by some considered a second-rate species, I know of nothing prettier at this season than this bright and effective little Orchid. The pretty rose tint of the blossoms is much enhanced by the glistening surface, which looks like hoar-frost or dew. It is seldom seen in anything approaching good condition, but this is as often as not the fault of the cultivator, for it can be grown, and grown well, with as little trouble as most things, hanging it up close to the glass on a bare rock is starvation to it, and, no matter how carefully attended to, there are sure to be times when it suffers from want of moisture. A much better plan is to place it in a wood basket, allowing a fairly thin layer of compost, this consisting of equal parts of peat and Sphagnum moss, with plenty of crocks and charcoal. In habit *R. secunda* is not unlike a Burlingtonia, and, like this plant, it will if not prevented grow away so far from its root-hold that the young pseudo-bulbs get weaker yearly from want of sustenance. To prevent this, let the basket used be fairly wide, and every season cover the plants, carefully pegging down the sides to the compost. I have even gone to the length of tying a little Moss over the outside of the basket, in order to afford the pots a chance to get hold, but this is not often necessary; nor, indeed, is it requisite that every root should enter the basket, for it is the habit of *R. secunda* to push roots out into a congenial atmosphere, where they feed upon the moisture and ammonia it contains. The small white roots at this season when the flowers are open have a quaint and distinct appearance. Though not liking too great heat, *R. secunda* will not thrive in a cool house, such suits many plants from New Grenada—its habitat. A mild, moist temperature, with plenty of ventilation and not too dense shade, suits it admirably, the foliage in such an one tak-

ing on that deep russet tint that is indicative of vigour, and the bloom spikes occurring with freedom. At no time should the plants be heavily watered, but all the year round they require a little moisture. Anyone having large specimen Tree Ferns may do worse than plant a few bits of this Orchid upon the stems, securing them in position with a little fine copper wire until roots form, when they would become self-supporting. The effect when in bloom would be striking and pretty, while no kind of root-hold could suit the plant better. R.

**Dendrobium rhodostoma.**—This is one of the prettiest hybrids ever raised, and a fine plant of it was recently in flower with Messrs. Veitch. It is a cross between *D. superbum* Huttoni and *D. sanguinolentum*, the flowers being only about 2 inches across, and produced freely upon the stem-like pseudo-bulbs. The sepals and petals are white, each having a bright crimson purple tip, this making it extremely showy. The lip is rosy-purple with a yellow centre. It appears to be very free in growth, and succeeds best in the warm house.

**Mormodes pardinum.**—This singular plant I recently noted in good condition with Mr. Bull. It is a fairly strong grower, and the blossoms appear principally upon the upper part of the scapes. These are yellowish with crimson spots, the pointed sepals giving them a peculiar appearance. Plenty of heat and light and a brisk, moist atmosphere are what this species delights in. It may, in fact, be treated like a *Dendrobium* while in active growth, abundance of water being afforded as soon as the young shoots are out of danger.—H.

**Maxillaria venusta.**—I have noticed this fine old species blooming in several collections lately. It is a strong-growing, free-flowering plant, not unlike *M. grandiflora* in habit. The flowers occur on erect scapes each about 6 inches in length, and have the segments pointed in front, broad at the base, pure white except the lip, which has a yellow centre and is spotted with crimson. It is worth growing in any collection of cool-house Orchids, the foliage being broad and ornamental when the plant is not in bloom. It requires plenty of moisture at the roots and in

the atmosphere all the year round. It is a native of Oceana, and was introduced in 1872.—H. R.

**Epidendrum cinnabarinum.**—Like most of the upright-growing section, this species continues to bloom over a long season, the flower-spikes lengthening as the blossoms fade, and producing others successively over a long season. These are about 2 inches across in the best forms, of a bright red on the outer segments, the lip having a deep yellow centre. It is a free-growing and easily cultivated plant if not kept too hot. In an airy large Cattleya house, where the temperature and atmospheric moisture are not liable to sudden fluctuations, it does well, if not dried at the root during the winter.

**Trichopilia Galeottiana.**—This pretty and distinct species was recently in flower at Mr. Bull's. It is not perhaps so showy as some, but well worth a place. The spikes each bear about two or three flowers, the sepals and petals of a greenish yellow tint, the lip whitish spotted with crimson. It is an easily-grown, free-blooming plant, and requires a place in the Cattleya house as near the glass as possible, but shaded from the direct rays of the sun. The plants may be repotted in spring or after blooming, using clean pots and an ordinary description of compost. It requires abundance of water while growing and to be kept just moist while at rest. It is a native of Mexico and was introduced in 1859.

**Oncidium pumilum.**—This is a somewhat rare little species, very pretty and attractive, but not large enough to find favour among present-day Orchid growers. It has rather thick leaves, each about 6 inches in height, and its blossoms are produced upon erect branching scapes. They are so densely set, that it would seem impossible to put a straw between them anywhere, and are bright golden yellow and brown in colour. It was flowering freely in Messrs. Veitch and Sons' nursery at Chelsea last week, and is growing in small pans suspended from the roof of a fairly warm house. Anyone liking small-flowered and quaint kinds would do well to give this species a trial. It is a native of Brazil, and was introduced in 1824.

**Catasetum Bungeorothi.**—This is one of the finest species in the genus, its beautiful and singular blossoms never failing to attract attention. The flowers are pure white after being

open a little while, and last long in good condition. The best place to grow it is a light, almost unshaded part of the East India house, where the sun is allowed to shine on the glass after closing time in the afternoon. Grow it in pots of peat and Moss and allow plenty of water at the roots as long as growth is active, diminishing the supply by degrees, in autumn and in winter keeping them well on the dry side. The culture of *C. Bungeorothi*, in short, does not differ much from that required for the deciduous *Dendrobiums*.

**Cypripedium Charlesworthi.**—There is a very large stock in all sizes of this plant at Clapton, one house being almost filled with it, and among the plants in bloom a good deal of variation is apparent. The distinct rosy white dorsal sepal and the pure white staminode are the most distinct characteristics of this species. The plants are oftentimes a little disappointing, for when the blooms are first open the fine colour on the sepal is very noticeable, but it fades considerably with age. It is a fairly popular plant by now, though perhaps it has not quite fulfilled our expectations when first imported by Charlesworth and Co. from the East Indies. A plate of a good representative form was given in *THE GARDEN*, April 13, 1895.

**Vanda cœrulea at Gunnersbury House.**—According to my views, *Vanda cœrulea* is the most beautiful of all the *Vandas*, and when seen at its best no Orchid meets with greater favour. Without being actually particularly difficult to cultivate, it is yet seldom seen in a presentable condition in private gardens. In common with other kinds of Orchids, this species has its likes and dislikes; in other words, it fails badly in some positions and grows almost like a weed in others. Mr. Hudson, at Gunnersbury House, has not long taken it in hand, but has already formed a group of which he may well be proud. Most of his plants were bought as imported, and established in baskets after being received. Both position and treatment seem to agree well with these *Vandas*, and the roots—which I invariably take note of first when examining Orchids—are plentiful and in a particularly happy state—a sure index to a healthy, free-flowering top-growth. The plants, without being actually exposed to direct sunshine, are yet suspended where abundance of light and genial air reaches them, anything like a strong, dry heat not suiting these or any other *Vanda* I have ever grown. The baskets are surfaced over with live *Sphagnum Moss*, a proof that the plants are receiving abundance of water during the growing season, and the exact treatment required. A snug corner in a gently heated house is where the best of Mr. Hudson's plants are located.—W. I.

#### ODONTOGLOSSUM URO-SKINNERI.

This very distinct and beautiful Orchid is a strong, vigorous-growing species bearing long strap-shaped leaves almost like those of a *Zygopetalum*, and the flower-spikes appear at the base of the pseudo-bulbs. These often grow nearly a yard in height, and just now are very showy in many collections round London and elsewhere. The blossoms open successively upon the scapes, and are each 3 inches across in the better forms, of a greenish yellow ground, covered with brownish markings on the sepals and petals; the lip is a pretty bright rose, irregularly streaked with white. The culture of *O. Uro-Skinneri* may be safely taken in hand by anyone. It will be noted that the roots are of a more fleshy character than those of the usual run of *Odontoglossums*, larger, and therefore more easily injured, and this fact should be kept in mind when repotting or otherwise disturbing them. The peat used in the compost for *O. Uro-Skinneri* should be of the best quality, and plenty of large, rough pieces of crocks or charcoal should be introduced with a little clean *Sphagnum Moss*. Break the old pots with a hammer if the roots are likely to be much entwined about the drainage and sides, and in repotting keep the base of the plant a

little above the rim. Owing to the character of the roots noted above, a pot of fairly good dimensions compared with those of the plant may be used, but this must be thoroughly drained and a couple of inches only of compost allowed, except for very large plants. In a house kept nicely moist and duly shaded new roots will soon be in evidence, and the plants will soon take water freely. Few Orchids require more water when in active growth; hence the reason for care in the compost and drainage. While the growths are young and soft little or no water should be given overhead, but when the foliage commences to harden, light dewings are very beneficial both in keeping down insects and also replenishing the atmosphere just around the plants. A soft brownish scale is apt to attack this plant, and should be sought for and kept under. Sponging carefully and often with clear tepid rain water will keep the plants clean without using any strong insecticide, or if the plants are really dirty, a little soft soap and tobacco water may be mixed with it. *O. Uro-Skinneri* was sent home in 1854 by the gentleman whose name it bears, he having found it growing upon rocks at Santa Caterina, near Guatemala.

**Angræcum articulatum.**—The free-blooming character of this species is well shown by a large batch now in flower at Messrs. Hugh Low and Co.'s nursery at Clapton. There are hundreds of plants, apparently only semi-established, or, at all events, not very long imported; but they are covered with spikes of the pretty white blossoms, each with its spur about 4 inches in length. It is not a difficult plant to grow, thriving well in any description of house, provided heat and atmospheric moisture abound. While not liking a dense shade, a little must be allowed, or the foliage is sure to be injured. Pots, baskets or suspended pans suit it well, the receptacles not being larger than will take the plants easily. Clean *Sphagnum Moss* and charcoal only are required as compost. Good drainage is necessary, as the plants take a lot of water when in active growth.

**Chysis lævis.**—This is certainly one of the finest species in the genus, and was recently in flower at Mr. Bull's. The stems attain, on the strongest plants, a height of 15 inches or 18 inches, and the drooping raceme of flowers occurs from the young growth. The sepals and petals are yellowish, with a brownish tinge at the base; the lip brighter, with reddish spots and blotches. Its culture is not difficult, yet requires care, especially during the early part of the season. It is not possible to flower it well unless the growths are well ripened in autumn. Yet the young shoots and foliage are at first very easily injured by strong sunlight. The plants are best grown in the *Cattleya* house in a compost consisting of equal parts of peat and Moss, a little good loam being added for strong plants and plenty of crocks in a finely broken state. Good drainage is necessary and a thin compost, there being no need to raise the plant above the level of the pot's rim. Allow plenty of water at all times when growth is active, reducing the supply in autumn, in winter giving only just sufficient to keep the stems plump. *C. lævis*—so called on account of the smooth lip—is a native of Mexico and first flowered in England in 1840.

**Lælia xanthina.**—Although not so showy as many others in this favourite genus, this species is extremely pretty and quite distinct. The stems grow over a foot in height, with a single leaf on each, and the spike usually bears about four flowers, each 4 inches and upwards across. The edges of the sepals and petals being turned back give them the appearance of being narrower than they really are. In colour they are yellow, sometimes with a median line of brownish green, and the lip is yellow, becoming paler at the edge and having several radiating lines of crimson-purple in the centre. *L. xanthina* is not so strong or so vigorous rooting as the majority of species, and consequently should be placed in medium sized

pots only, these well drained, and a thin layer of compost suffices. Equal parts of peat and Moss with sufficient hard material to prevent closeness will suit it well. Water must be judiciously given, especially during winter, the quantity required during this season being very small. Even when growing freely, it is wise to let the compost get well on the dry side before giving fresh supply, and then to water thoroughly. The flowers appear at various times during the summer, and last about three weeks if kept cool and dry.

#### EPIDENDRUM FRAGRANS.

This species and the nearly related *E. radiatum* and *E. cochleatum* are all now in flower, and each has its distinguishing characteristic. The last, the oldest species of them all, in fact one of the oldest known *Epidendrums*, a quaint and singular Orchid, worthy of cultivation where this class of plants is cared for. In habit it is very like *Cattleya* of the labiata section, the pseudo-bulb erect, carrying one or two leaves, from the base which the flower-spikes spring. This bears seven blossoms about 3 inches across, the lip being inverted and shell-like—hence the specific name—in colour a deep purple-maroon. The sepals and petals are spreading, greenish white, having pretty effect against the purple of the lip. The shape and colour of flower *E. fragrans* and *radiatum* are similar to each other; indeed, the only difference apparently is the looser habit of the larger blossoms of the latter species. The colour is similar to that of *E. cochleatum* on the sepals and petals, the purple of the lip being brighter with more blue and less crimson about it. The culture of this group of plants is not difficult. The *Cattleya* house suits them well, a light position, only shaded from the direct rays of the sun, being chosen. If possible it is best to keep them to an annual cycle of growth and rest, but this is not always easy, especially with *E. cochleatum*, which sometimes grows away in an unaccountable manner when least expected. The style of growth and manner of rooting give a clue as to the best compost and size of pot, as these are not unlike those used for the evergreen section of *Dendrobiums*, such as *D. densiflorum* and its allies. While not liking the deep pots that the noble thrives in, the small pans used for deciduous kinds make the treatment too poor, and it is well to strike a medium between these. From time to time growth is pushing at the base in spring, and the blossoms are past the plants require a large quantity of water, both at the roots and in the atmosphere. This must be diminished by degrees when the bulbs are fully made up, and although in winter they need not be actually dry, yet little moisture is necessary. A cool, fairly dry house suits them best, *E. fragrans* especially; if in winter this is wintered in heat it fails to blossom properly.

**Oncidium crispum grandiflorum.**—As distinct from the type, this variety has much larger flowers, of greater substance, and usually a narrow margin of bright golden yellow to all the segments. This makes it a very fine thing, and plant I recently noted was carrying four spikes with an aggregate of something like seven flowers. To grow this Orchid well, a light, most unshaded position should be chosen for it, and the plants may be grown in shallow baskets with a thin layer of rough open compost. Plenty of water while growing and a moist atmosphere are essential; in winter, or whenever growth is quiet, give much less.—H.

**Oncidium lanceanum.**—A fine lot of the *Oncidium* is now in flower at Clapton, considerable variation being noted among them. The flowers of a good typical form will be about 2 inches across, the sepals and petals greenish yellow, with chocolate blotches, the lip varying in colour from almost a pure white to a deep violet-purple. Those of the latter colour make a fine show and may be considered the better forms. *O. lanceanum* has not the best of charac-

as a garden Orchid, but if good, healthy, well-leaved plants are obtained at first, and they are not unduly disturbed, not much difficulty will be found in their culture. It likes plenty of heat and sunlight and a moist atmosphere while growing.

**Cymbidium tigrinum.**—This pretty and sweet-scented Orchid I noted in flower this week. Unlike the *Lowianum* and similar species, it is a small compact grower, seldom growing more than 9 inches high. The racemes are short, bearing about three flowers, greenish in ground colour, with crimson spots. The lip is white, with regular purple and crimson markings. It need not be grown in so large pots or so strong a compost as the large growing kinds, equal parts of peat and Moss suiting it well over abundant drainage. It must not be dried when in flower or at rest, and while growing freely it takes a full supply of moisture. It does well at the cool end of the Cattleya house, and was introduced from the Masserim Mountains in 1864.—R.

**Oncidium triquetrum.**—The blossoms of this species, very pretty, though small, are produced on spikes each containing from a dozen to fifteen. They are rosy white in ground colour, sometimes having a pure white margin to the segments, and these are spotted and blotched with crimson. The plant is of tufted habit, the leaves about 6 inches high and bearing no pseudo-bulbs. To grow it well it should be placed in shallow pans of rough fibrous peat, with very little moss, over good drainage. A light position should be chosen at the cool end of the Cattleya house, and the roots must not be dried off. It is a very old species, having been referred to over a century ago, and is a native of Jamaica.

**Lælio-Cattleyas.**—This rapidly extending genus already contains many of the finest artificially raised hybrid Orchids in existence, some of the later varieties of *L. C. Canhamiana*, for instance, being among the showiest. *L. C. Canhamiana albida* is a fine large flower, the progeny of *Lælia purpurata* and *Cattleya Mossiae*. The sepals and petals are nearly pure white with only a very faint flush of rose, while the lip, as may be imagined by its parentage, is deeply tinted and very finely marked. *L. C. Stella* is also very handsome, with deeply-tinted outer segments and finely undulated lip. This is the result of crossing *Lælia elegans* and *Cattleya crispata*. *L. C. Sphyræ* is an exquisite flower, the plant of dwarf and fairly robust habit. It is a cross between *Cattleya Mendeli* and *Lælia xanthina*, and in its fully developed lip and the distinct yellowish tint of the outer segments unites the best characteristics of its parents in a pleasing manner. All hybrids raised between these genera seem to possess a robust constitution, a fact that augurs well for their future popularity.

#### DENDROBIUM STRATIOTES.

In its best forms this rare species is very beautiful. It has straight, erect, stem-like pseudo-bulbs, stiff-looking and formal. It grows about 2 feet high, the leaves being about 6 inches in length, and the racemes of flower cur at the top of the pseudo-bulbs. These carry several flowers, each about 3 inches across, the widest part, which is from the point of the lip to that of the dorsal sepal. This, with the dorsal sepals and petals are more or less undulated, pale greenish yellow, the lip three-lobed, the front one heart-shaped, the side ones standing erect; it is pure white in front, streaked with purple. These flowers appear at various times during the summer and autumn, and last several weeks in good condition. Like all the New Guinea Dendrobies, *D. stratiotes* delights in a strong, moist heat and plenty of light while making its growth, and I recently noted some very fine stems in a large Croton house here, apparently, very little shade was allowed even in the height of summer. But

it suited this *Dendrobium* as well as one or two of the nigro-hirsute section that were growing with it. If grown in the ordinary East India house the plants should be placed as near the glass as possible, and as its habit hardly fits it for baskets, the pots must be suspended. These need not be large, in fact, the roots do not thrive in a great amount of compost. Clean Sphagnum Moss, with a little fibrous peat and plenty of crocks and charcoal, will suit it well, and the base of the pseudo-bulbs must not be buried. The plants may be repotted when new growth is starting, and the most critical time with the watering is when the young shoots are a few inches high before they commence to root independently. Too much moisture then or cold water will cause them to rot at the base, back breaks having then to be relied on if these are produced. Still, with ordinary care this will not happen, and when once growth gets well away it will be very rapid. Resting the plants is another detail sometimes mismanaged. These plants are quite unlike the *Moulmein* and other Indian kinds, and if forced to rest by withholding water when they are starting to grow, they soon show their dislike to the treatment. Let them rest in summer if they are inclined, but never try and force them to do this or to grow. A drier atmosphere for a few weeks is recuperative to them in early summer, or at any time when the growth is not active, but when once the shoots are seen on the move, then let them have the advantage of a stimulating temperature, be it summer or winter. If yellow thrips is carefully kept under by sponging and the use of the vaporising fumigator, little trouble will be found with any other insects. Root moisture is necessary the whole year round, more, of course, when top and root growth are most active. *D. stratiotes* was introduced by M. Linden, of Brussels, whose collector found it in New Guinea or some of the nearly adjacent islands in 1885. H. R.

#### SHORT NOTES.—ORCHIDS.

**Masdevallia macrura.**—This is a free-blooming interesting species I have noticed in flower this week. In the best forms the blossoms are nearly a foot in length, the sepals long and tail-like, of a greenish-yellow tint with small purple spots. It blooms at various seasons and should be grown in peat and Moss with the warmest section of the genus.—I.

**Lælia elegans Mastersi.**—There are many beautiful forms of this variable Orchid differing greatly in size and colour, but this is very distinct. The sepals and petals are almost pure white, only a faint flush of rose being noticed, while the finely formed lip has in addition to the blotch in front a distinct margin of violet-purple on the side lobes. A nice plant of it was recently in flower with Mr. Bull at Chelsea.

**Oncidium prætextum aureum.**—In the matter of colouring this fine species does not vary so much as many others, but this is a distinct variety. The usual brownish blotches and margin have almost disappeared, and in their place there is a kind of faint marbling of orange such as is seen on some varieties of *Odontoglossum Schleiperianum*. It does well in a light position in the Cattleya house, and should never be dried off.

**Oncidium tigrinum.**—Already the branching scapes of bright yellow blossoms produced by this *Oncid* are in full beauty. It makes a capital plant for keeping up a display now that Orchids are getting past their best, and one never seems to have too many of it. The flowers are delicately scented, the blade of the lip a bright yellow, the other segments rather small. It does well in the cool house in medium-sized pots of peat and Moss, and needs moisture all the year round.

## KITCHEN GARDEN.

### GARDEN PEAS—1897.

This season as a whole has not been one of the most favourable for this crop. During the early months the cold winds kept growth in check to such an extent that it was late before gathering was general, but when once a start was made Peas for a time were plentiful, but of late in this district they have become scarce. Amongst those of recent introduction *Early Morn* may be considered an advance in the large-podded varieties. With me this grew to the height of about 4 feet, and was ready for use soon after *Exonian*. *Carter's Forcing* is a dwarf prolific kind and very early, coming into use about the same time as *Chelsea Gem*. The pods are straight and of a deep green colour, and the peas of excellent flavour when cooked. *Carter's Seedling* is another variety with straight, deep green pods, growing to the height of 4 feet, of robust constitution, and free habit. *Danby Stratagem* grew about 4 feet high. The foliage and pods were of a deep green colour, the latter hung in pairs all along the sides of the rows. *Majestic* also was tried, and this grew to the height of the last named, but was not nearly so prolific. *Magie*, a variety sent out by Mr. Eckford, is a good Pea, its robust foliage and deep green pods being very conspicuous. A row of each about 60 yards long was sown in a field; the ground was of but poor quality, therefore they did not attain the same height as those sown in the garden. About sixty varieties in all were tried, including many of recent introduction from various raisers. As a Pea for podding and withstanding the dry weather *Veitch's Main-crop* stood first. It is no doubt an excellent variety either for garden or field, as its robust constitution prevents an early attack of mildew, which often plays sad havoc in dry weather. *Sutton's Invincible* was also first-class, likewise *Conqueror*, *Prize-winner*, *Dwarf Defiance*, *Peerless*, and *Windsor Castle* sent out by the same firm. Dwarf Peas for small gardens are a great advantage, particularly where they can be depended upon for their productiveness. Amongst the late ones of this class *Autoerat*, *Late Queen*, and *Michaelmas* are the three best. All have a good constitution, and may be relied on as being productive. Tall Peas have gone out of favour, especially where there is a difficulty in getting stakes to support them; there are, however, some first-class varieties amongst these that are well worthy of cultivation, notably those of the *Ne Plus Ultra* type, the flavour of which is excellent. They are far more certain to give a crop than the dwarf ones, not being so subject to the attacks from fly; their growth being much more rapid, less chance is afforded for this pest to harbour in the points of the growths. There is one drawback even where stakes are plentiful, for in exposed situations the haulm is often blown about by the high winds and spoiled.

Busted Park, Uckfield. H. C. P.

**Peas and drought.**—The notes from "S. H." at p. 102 are to the point. I find it advisable to mulch before the stakes are put to the Peas. This season I soaked the mulching with manure water occasionally. Regarding sorts, I am at one with "S. H.," and consider some of the big-podded kinds a delusion. It seems strange that the big-podded kinds should find so much favour with judges.—DORSET.

**Lettuce Continuity.**—I was pleased to read a note of praise on this Lettuce by "E. B. C.," page 101. I do not think this Cabbage Lettuce is so well known as it should be. I tried it when first sent out some years ago, and found it not only first rate from an eatable point of view, but also for withstanding the drought, and not running to seed. In gardens of limited size one sometimes finds it a difficult matter to keep up a supply of good crisp Lettuce, owing to the fact that no sooner does the majority of sorts arrive at maturity, than running to seed takes place.

Continuity, on the other hand, remains intact and of good flavour for a long period. It grows to a large size in good soil, and is of a peculiar bronzy appearance outwardly.—J. C.

**Potato Carter's Record.**—In summers like the present, when the majority of mid-season varieties of Potatoes ripen prematurely, the tubers only swelling to about one half their normal size, any new sort which does well, in spite of a dry root run and parched atmosphere, is sure to find favour, especially with those whose gardens are of a light, porous nature. Of new varieties recently tried, Carter's Record has given me great satisfaction. I planted the tubers with a view to lifting for mid-season supply, but the growth was so rapid and the tubers ready for lifting in such a short time, that I feel sure it might, with certainty, be planted as a first early. It crops well, is of good colour, and first-rate flavour.—C. C. H.

**Onion Record.**—I am very much impressed with the general character of this Onion. So many of the well-known strains of the Spanish type are very flat, the bulbs, though of fairly large circumference, being very light. Not so, however, with the deep-bulbed varieties, of which Record is a good form. It grows under good cultivation to a large size, is of fine globular form, and a grand Onion for exhibition. The fine glossy skin which it has gives it additional beauty, and the exhibitor will find in Record just the Onion he needs for making a mark either as a single dish or for collections. With me it has stood a dry season well and will undoubtedly be largely grown.—GROWER.

**Late market Peas.**—What has struck me for many years is the fact that market gardeners, as a rule, and also farmers who yearly grow a certain acreage of Peas, put all their eggs into one basket, and sow only for gathering during June and July. All observant people must have noticed how scarce good Peas are during the month of August; even at seaside towns, where good vegetables are appreciated and readily bought, the supply is just as poor. At this season Cabbages and Cauliflowers are not at their best, the heat of summer being, as a rule, too great for them. This fact leaves consumers of vegetables in towns little to choose beyond Scarlet Runner Beans and Vegetable Marrows. If such good dry-weather Peas as Prodigy, Stratagem and Omega were grown for producing during August, they would find a ready sale and well repay the grower.—GROWER.

**Garden Turnips.**—The soil is now so heated that if but sufficient moisture be furnished, seed of the Early Snowball sown at once, and again just at the close of the month, will germinate quickly. The bulbs thus produced may not from the second sowing be large, but they will be very fresh and even delicious eating. Still further, they will endure frosts much better than larger ones, and finally, if not otherwise used, will give nice tops in the spring. To get bulbs of fair size to stand the winter, a sowing of the Red Globe may be made at once also. If the recent rains have been general germination will be very rapid. It is much better to sow seed in shallow drills than broadcast, also to sow thinly, as the labour of thinning after growth is so much lessened. Those who like yellow Turnips, and they are exceedingly pleasant eating, should make a sowing of the Golden Ball.—D.

**Turnips in hot weather.**—I never remember to have seen Turnips fail so completely as during the last few days owing to heat and drought, as, no matter how well watered, say once or twice a week, after one day's exposure they showed signs of distress. I fear, no matter where sown, the roots will be poor and flavourless, and if grown under trees they run badly. Now is a good time to make up losses. With a genial rain and the earth so warm, the seeds will germinate in three or four days and the roots be fit for use in a month. For present needs a quick-growing variety, such as Snowball, may be sown, and a good breadth of Yellow Globe or Golden Ball will be good for later supplies. Failing these, if white-fleshed Turnips are liked best, Red Globe and Green-top

Stone are excellent autumn varieties, as they keep sound so long and are superior in flavour to the flat roots with little tap root.—S. H.

**Potato English Beauty.**—I am pleased to see the note on this new variety (p. 85) by "W. I.," as it so fully confirms my own views as to the merits of the above. "A. W.," I find, also recommends this for its crop, in addition to good quality. As most Potato growers are aware, a dry, warm summer is favourable to the heavy cropping American varieties. English Beauty claims one of these (Beauty of Hebron) as one of its parents, with the result that there is a very heavy yield, and the other parent, Myatt's Prolific, adds to the quality, with dwarf top and earliness combined. English Beauty, just lifted (August 3), has given a splendid crop, and the quality is all that can be desired. From a very small quantity of seed I have a very fine yield. It can be lifted for use earlier than the Ashleaf. This is a great gain in gardens where much has to be grown in a small space.—P. F.

**Lettuce running to seed.**—I am obliged to "E. B.," Claremont (p. 101), in asking me to give Continuity Cabbage Lettuce a trial. I am able to confirm his remarks as to its drought-resisting qualities, as I recently saw this variety in a trial of Lettuces, and it was quite solid when many others had bolted. For several years I grew this variety and I liked it greatly, but some objection was made to its colour, a light coloured Lettuce being preferred, such kinds as Golden Queen being always asked for. For a season or two I have not grown Continuity, but intend to have some in reserve in future. Where Lettuces are needed in quantity, no one will find a better variety, and, I may add, if Cos varieties are needed, the Bath or Brown Cos sown for summer use is one of the best in hot, dry summers. This and the one "E. B." advises will not fail. In hot weather some of the summer Cos Lettuces bolt before half grown and the crop is lost, but those named are always reliable.—S. H. B.

**The American Potatoes.**—This has been an ideal season for such kinds as Early Rose, Beauty of Hebron, Puritan and other large growers. Owing to heat and drought, the amount of moisture generally found in these kinds is less and the quality superior. We often see these varieties objected to, and in wet, sunless summers they are not good. Much, however, depends upon the soil and position where grown. If the soil is light and poor or at all shallow, Early Puritan is excellent, and need not be discarded, even in wet seasons, if lifted early. For heavy clay soils I would not advise these kinds, as they are subject to disease. Neither should they be grown under trees, no matter how good the soil, as if the season is at all wet it is fatal to these kinds. I have noted they are very heavy croppers, and this makes them valuable market varieties, as they can be lifted early and find a ready sale. Grown in fresh land yearly they give a good return, but should not be crowded, owing to the robust top-growth. This year from light soil these American varieties are of splendid quality when cooked.—G. W. S.

**Vegetable Marrows.**—When the fruit committee were invited to examine in Chiswick Gardens a couple of Vegetable Marrows that had presumably been sent from the Levant, that body found very poor products, such as would be classed in our lists as very second-rate. It does seem evident that improvements in these edible Gourds come very slowly, we might almost say do not come at all. With the exception of that most useful variety, Pen-y-byd, the best and most prolific of its class, nothing particularly distinct has been introduced for many years. The Custard Cream Marrow or Gourd, once so much favoured, seems to have lost favour altogether, and the long, tubular-formed fruits are most in request. But these, as vegetable food, give very poor material, consisting, as they do, of about 85 per cent. of water. Without doubt, the best food is found in some of the so-called Squashes. One was the Ohio variety, that used

to be much grown some years ago. It is, however, a coarse grower, and a worse fruiter, the fruits being yellow. There seems to be a prettiest wide field open to anyone, who has leisure to strive to produce amongst Marrows some variety that is as good and much more attractive than is any one we at present possess. He seldom the bush varieties are met with, although they produce very white, handsome fruit. Probably they do not crop so continuously as the free growers, yet these cover a maximum of ground, and give but a minimum of fruit. Generally, Marrows are eaten far too large, and in the production of these large fruits, no doubt the plants suffer a severe strain, which checks productiveness.—D.

## STOVE AND GREENHOUSE.

### SUMMER TREATMENT OF CALLAS.

I was very much interested in the remarks of "A Midland Grower" recently contributed to *THE GARDEN*, concerning a method of culture the above that I recommended a year ago. It is interesting to know that success has been achieved by what, to me at least, is not at all a new method, seeing I have practised it for a dozen or fifteen years. And while I have no desire specially to persuade gardeners to alter their modes of culture, one cannot refrain occasionally from putting forth a system which decidedly minimises labour to some extent at least in summer, and at the same time provides much earlier supply of blossom than is possible under the best means of culture by any other system. Again, the system advocated by me of simply laying the pots on their sides, or making a stack of them in any out-of-the-way corner, should have some weight with the gardeners who have not too much assistance or much room at command, and yet are expected to produce flowers at almost any moment. A gardener with limited space for planting such things in the kitchen garden, or equally good place, should be only too glad to know that quite as good if not indeed better and finer blooms can be obtained, if instead of planting such things in a deep, prepared trench of rich soil, he merely lays his plants for six weeks at least on their sides. In gardens that are under-manned a few batches of winter flowering plants that could not be dismissed from all attention culture would be a boon indeed. And in truth as it came to me a few years ago, when growing several hundred plants of these Callas. So very old gardeners who saw these hundreds of plants scorching to death, as they termed it week by week in the great heat of the Jubilee year, 1887, prophesied many things concerning the future of my plants, none of which were ever realised. Independently of the saving of time, and the assurance that good spathes would be had weeks in advance of those from the planting-out system, is the fact that the plants that are thus dried off are so much dwarfed and more compact. There are also a freshness and vigour about them never seen in the bigger, coarser specimens that have been luxuriating in rich soil all the summer long, when they should have been enjoying a well-earned rest and flowering steadily all the previous winter. Given the rest and change that I have come to regard as almost a necessity, the corns are more than the average of stored-up energy ready to commence flowering again. The plants blooming as they usually do under six weeks from potting up again, and the pure white massive blooms are the best answer as to wisdom or otherwise of the system. E.

## GREENHOUSE AZALEAS.

The greenhouse Azalea is one of the most popular of indoor plants. With good treatment plants never fail to do well, and to outlive a greater portion of other hard-wooded things grown in pots. In fact, Azaleas are amongst the longest lived of the various tribes of greenhouse plants. In proof of this I may instance several large collections that are in the hands of some of the market growers near London, many of the specimens in which are known to be twenty years old. They consist mostly of the

carefully cared for, it usually takes two years to bring them round. After all it may be said that there is some plea to justify this way of treating Azaleas, inasmuch as most of what has been written on their cultivation is to the effect that the turning-out process is the right course to follow. Another source of weakness that Azaleas, in common with most other hard-wooded plants, suffer from is want of sufficient nutriment. In the case of pot plants of the numerous kinds that bear partial shaking out and repotting annually, the old material which has become

in some form. That old Azaleas can be kept for a long time full of strength and vigour I have proved with specimens that have remained undisturbed in the same soil for ten years, and at the end of the time they made as good wood as when they were young. Peat of even the best quality is not rich enough to enable Azaleas to make the growth they should do. The assistance that is required in this way to either get young Azaleas on quickly or to keep up the vigour of old plants is much more than seems to be generally supposed. When ordinary manure water is used for old specimens it should be given once a week during the time that the plants are making their growth, and up to the time the wood is approaching a hard, mature condition and the buds are prominent. After this stage has been reached it is doubtful if manure in any shape does not do more harm than good.

Regarding the new varieties of Azaleas, many of which have been sent from the Continent within the last score of years, it is doubtful if they are any improvement on the well-known older sorts. Some of them are an advance in the colour and also in form of their flowers, if we accept the florists' circular outline as the standard to aim at. The flowers in the variety figured are salmon-scarlet flamed with white. The plant illustrated has been grown in a thoroughly natural way, hence we get the shoots loaded with blossoms.

GROWER.



A naturally grown plant of *Azalea Verraeana*.

White and Fielder's White, which is only slightly different from the original sort. The plants in question are full of vigour and make spots from 8 inches to 15 inches in length annually, only a small percentage of which fails to flower.

The weakening effects which turning out-of-doors has on plants whilst making their growth may be seen in hardy shrubs that have been overwintered in pots under glass when treated in this way; the partially formed shoots do not thicken, the immature leaves look yellow and sickly, and when the plants are again planted out and fairly

exhausted is to a great extent got rid of and its place supplied by new. With Azaleas and other things of a like description, the nature of which is such that they will not submit to be treated in this way, the roots remain for years in the same soil, and unless something is done to make up for what the roots extract from it, the whole becomes so poor that the plants cannot do more than exist in it. This is what takes place with old specimens that, after being put into pots as large as it is convenient to give them, by-and-by become dependent on what they receive in the shape of manure in

**Begonia Worthiana.**—This Begonia which is largely used in the flower garden is interesting from the fact that it still remains so popular, while the different varieties raised about the same time have in nearly every case disappeared from cultivation. The early history of Begonia Worthiana is given in the French journal *Le Jardin* for August 5, from which it appears that this variety originated as a seedling from *B. boliviensis*, and was raised by M. Barré, gardener to M. Worth, at Puteaux, in all probability in 1869, as it was described by M. Carrière, and by him named *B. Worthiana* in 1870. As *B. Sedeni*, which was the first hybrid tuberous-rooted Begonia raised in this country, was distributed in 1870, it will be seen that *B. Worthiana* stands out as one of the earliest hybrids of this class.—T.

**Bouvardia leiantha.**—This is a pretty and bright old greenhouse plant not often met with. Its habit is distinct from that of the garden hybrids belonging to the genus, such as are now grown in immense numbers everywhere for cutting. The corymbs of flower are not so large as those of the hybrids, but of a pretty soft scarlet colour that is very attractive, and these are very freely produced all through the autumn and early winter. Indeed, there is hardly a month in the year when flowers may not be looked for, and in the west of

England it is often used for planting out during the summer months.

**Zonal Pelargonium Oreste.**—We have had many distinct Pelargoniums sent to this country by French raisers, among those of recent years being *Souvenir de Mirande*, which was the commencement of a distinct and now popular section of single-flowered zonal Pelargoniums. A couple of years or so ago M. Lemoine, of Nancy, sent out a zonal Pelargonium—*Alliance*—remarkable for its speckled blossoms, and the above-mentioned variety *Oreste* is in the same way, but with its distinctive features more pronounced. The ground colour of the flower is a kind of lilac-pink, dotted

profusely, especially on the three lower petals, with bright purple. The dotting is far more dense towards the centre of the flower than it is at the margins. This variety presents such an uncommon appearance, that it will be sure to attract attention, although it can scarcely be regarded as a particularly showy form. Being such a decided break away from existing kinds, this will doubtless be employed by the hybridist in the production of new varieties. *Pelargonium Oreste* is one of M. Lemoine's raising, and was sent out by him in the spring of this year. As far as my experience extends, it does not appear to be particularly vigorous.—H. P.

**Fuchsia Countess of Aberdeen.**—This distinct plant should make a most effective group. It has pure white blooms, which are small, but produced with such remarkable freedom that a complete mass of pearly drops results. It grows into a close bush no more than a foot high. As a pot plant it is a striking object, so unlike any other *Fuchsia* that all who see it are charmed.—H.

### LILIUM NEPALENSE.

This Lily is certainly one of the most distinct members of the entire genus, and forms a very attractive object in the greenhouse, for to be seen at its best it needs that amount of protection. A great deal of interest was attached to this Lily when it was first shown in flower by Messrs. Low on September 11, 1888, for whether it had been previously introduced is at least an open question, and from the various rumours of what *L. nepalense* was like, no one was prepared to see such a beautiful and distinct Lily. It is now generally well known, but a fair amount of individual differences exists in the case of this Lily, as well as in many other species. In some the chocolate-purple centre extends farther down the flower than in others, while the lighter coloured reflexed portion varies a good deal in its shade of yellow or greenish yellow. While this Lily can be readily flowered in a satisfactory manner if good imported bulbs are obtainable, it is really a very difficult species to cultivate, as the second year the display of blossoms will, as a rule, be few and far between. From this circumstance, continual importations are necessary to keep up the supply, and as they are collected in a wild state and not cultivated for the purpose, as is done in the case of the Japanese kinds, it is very probable that *L. nepalense* will soon get much scarcer than it was, as has already happened in the case of the *Neilgherry Lily* (*Lilium neilgherrense*). *L. nepalense* is a native of Upper Burmah, and other species from the same region are *L. sulphureum*, *L. Bakerianum*, *L. primum*, and *L. Lowi*. Of these, *L. sulphureum* still reaches this country in considerable numbers, *L. Lowi* crops up occasionally, while the other two are quite rare. A notable feature about these Burmese Lilies is the great general resemblance that the bulbs bear to one another, for although one may select some individuals with a certain amount of confidence, yet in the case of others it is quite impossible to speak with any degree of certainty till growth commences. *L. sulphureum*, as a rule, has larger and darker coloured bulbs than the others, but small ones of this species are very puzzling. In the case of *L. nepalense*, and, in fact, all the above-mentioned kinds, the bulbs should be potted as soon as received, which usually happens in the first two months of the year. Pots 5 inches or 6 inches in diameter will be sufficient for even the largest bulbs, as, in common with all Lilies, overpotting must be avoided. The pots should be well drained, and a mixture of loam, peat, and sand forms a very suitable compost. In potting, the upper part of the bulb should be about half an inch below the surface of the soil. If the soil is kept fairly moist, the roots at the base of the bulb will soon become active, but it is often some time before the shoot appears above the surface. The shoots of this Lily are stont, but few in number, and while in the case of some Lilies a great quantity are pushed out at the base of the flower-stem, in this

species they are not at all numerous. After potting, a cool greenhouse temperature, such as that in which *Pelargoniums* thrive, will suit *L. nepalense* well. During the growing season the principal care will be to keep the plants clear of aphides, as they quickly do a considerable amount of injury if allowed to congregate among the young unfolding leaves. H. P.

### BOUVARDIAS.

Good flowering plants in pots are not over plentiful at this season of the year. Although *Bouvardias* are usually regarded as late autumn and winter flowering plants, they may be had in bloom nearly throughout the year. One-year-old cut-back plants are best for early summer blooming, but early-struck cuttings make good plants for flowering in August. The variety most suitable for summer flowering as a pot plant is *Candidissima*, with pure white flowers. This forms a very dwarf and compact plant, and if stopped evenly, all the shoots will come into bloom at the same time. *Jasminiflora* is another good white, and *Jasminoides paniculata* may be recommended, being very free-growing and dwarf in habit. *Reine des Roses* is perhaps the best pink for summer. Grown under the same treatment it will come into bloom some weeks before most varieties. *Mrs. R. Green* is a general favourite. It varies a little in colour, but at its best the colour is a very pleasing shade of salmon pink. *President Cleveland* is by far the best scarlet we have, and I am surprised that the other scarlet sorts are kept in cultivation. The oldest scarlet variety, *Hogarth*, is still in demand. The double variety of this, *A. Neuner* (white), and *President* (Garfield) (pink) include all the doubles worth growing. Several other singles might be named. *Humboldtii corymbiflora*, though not suitable for pot work, is very useful for cut bloom. This flowers well when planted out in the open, but as the bloom is so easily damaged by wind or wet it is more useful when grown under glass. To keep up a succession of bloom the plants must be potted in a good rich compost, and after the pots are well filled with roots, manure may be used freely. No shade whatever should be given, and if watering is properly attended to, the hottest sunshine will do no damage.

In growing those recommended for pots, it is important to propagate as early in the year as possible. The plants should be potted in light porous soil and grown on in warmth during the early part of the season, and later on they will do well in cold pits, the lights being taken off in favourable weather. Stopping the plants requires careful attention. Each time they are gone over all the shoots should be stopped, and each time they should be stopped back to within one joint of the previous growth. Although *Bouvardias* enjoy hot, dry weather, they must not be allowed to get too dry at the root, and the syringe should be used freely, which will go a long way towards keeping off insects. Clear soot water may be used, but this must not be applied when the sun is out. H.

### MARGUERITE CARNATIONS IN POTS.

THESE are grown for late autumn and early winter bloom, and very useful they are at that time, when Carnations generally are over, and so many things in the outdoor garden are past their best. They are, however, equally serviceable during the spring months, and it is possible to have a good supply of Carnations up to the time they begin to flower in the open ground. I do not consider this race of Carnations of much service for midwinter bloom: they form buds freely in the autumn, but the blooms do not seem to have much substance when they open and quickly fade. From the beginning of March onward they come good in form and colour, and have that delicious fragrance which is almost entirely wanting during the dull winter months. The culture of the *Marguerite Carnations* is remarkably simple, consisting in putting them out in early

spring in well-worked, fairly enriched ground, a lifting and potting them late in summer or early in autumn. Many sow the seed in early spring in warmth, but I much prefer to sow in July early in August in a cold frame. The seed germinates freely at that season, and the young plants can be kept in a cool house through the winter coming into the open air in spring, without having been subjected to the debilitating effect of artificial heat. No hardening off is necessary, as is indispensable in the case of plants raised in heat February; and if planting out for the summer months is to be practised, the young plants can be set out a month or six weeks earlier than otherwise be the case. Some grow these Carnations in pots during the summer, but I am decidedly in favour of putting them into the open ground. Healthy young seedlings put out early in April will grow into specimens large enough for 7-inch pots, and they will be crowded with buds by the close of the summer. Early planting admits of early lifting, the plants being large enough to pot up by the middle of August. Flower-spikes will be thrown up, when the plants are doing well, early in July; but they will have to be pinched off, as flowers are not required before October, just as outdoor things are mostly over, and the formation of side growth is thereby encouraged, so that compact leafy specimens with abundant foliage down to the rim of the pot are obtained. From the beginning of August the flower-stems should be allowed to put up, as these will give a crop of bloom during the autumn and early winter months. If the weather is dry, it is advisable to give a good watering the day previous to lifting. Pots only large enough to contain the roots should be used, as the object is to get the plants as pot-bound as possible in winter. The small amount of fresh soil necessary should be very fine, so that it can be worked among the roots. If the plants are stood in a cold frame, shaded from hot sun, and kept rather close for a few days, they will soon make new roots, and can then be exposed to the full sun. I have had plants treated as above recommended, the roots of which could hardly be got into 8-inch pots, and which gave a constant succession of bloom from November to July. The colours, too, are really good, ranging from pure white to the darkest crimson, and they have the true Clove scent.—J. C. B., in *Field*.

## ORCHARD AND FRUIT GARDEN

### EARLY PEARS.

THE *Hessle*, or *Hazel*, as it is more often called, was years ago planted in great quantities; indeed, it was the chief fruit in market garden. Around the metropolis there are still many old gardens with trees of this variety, which rarely fail to fruit. This early Pear is in season in September, and is an enormous cropper. Early varieties should not be grown to the exclusion of late varieties, but with a garden of any size few early fruits are most useful, such varieties as *Jargonelle* and the small, but very early *Doyenné d'Été*, which is one of the very first Pears ripe, being fit for use in July. It is small, but refreshing, and of good flavour when gathered a few days before it is ripe; indeed this remark applies to the *Hessle*, the *Jargonelle*, and most of the early kinds.

The newer *St. Swithin* is one of the earliest Pears I have grown, and a note on early Pears would be incomplete without referring to this variety. This season it was ripe the third week in July, and a few fruits were earlier. *St. Swithin* is a medium-sized fruit if well grown, but, owing to its free-bearing qualities, it should be well thinned. In appearance it is not unlike a small *Jargonelle*, and, like that variety, is of poor quality if allowed to hang till the fruit are fully ripe. I have it in cordon and bus

form, and it never fails to give a good crop, but cordon trees are the earlier. As regards the quality, it is variable. I consider it superior to the Hessele, and a few fruits should be

am now gathering very nice fruits of excellent quality and of grand colour. For some years I grew Waterloo in pots, and found it one of the best, but never remember to have seen it so good on walls as this year, the flavour also being first-rate. On a south wall this variety was ripe on July 16, and the trees on the west aspect have provided fruits since that date. The fruits from the west wall are much finer than those from the south wall. There is one thing these early Peaches need, and that is severe thinning, as the fruits lack size if at all crowded. I prefer this variety to Early Alexander for walls, and it is more reliable as regards crop. With me it rarely fails to finish fruits of good colour and size. G. W.

**Strawberry runners.**—The season has been one of the worst on record as far as my experience goes, as regards the rooting of the runners, the excessive heat and drought having checked growth. The earlier runners did fairly well, but made more progress. I am sure where the plants bore fruit the runners will be late. Fortunately, we had a nice rain on the 8th, and things will improve greatly. One will need to exercise patience as regards planting if earlier runners from special plants were not procured. I am a strong advocate for reserving a few plants or rows for runner production, not fruiting these, layering early, and planting also, as plants in their permanent quarters will do grandly and get the benefit of the much-needed rains. I am sure large growers will experience a difficulty in getting an ample supply, as runners on certain varieties are very scarce. I prefer a plant of medium size with a single crown to those larger newer varieties with several crowns.—G. WYTHES.

**Apricot trees in hot weather.**—Although trees in very many gardens are this year minus fruit, the crop for next year will to a great extent be jeopardised if the roots are allowed to become too dry, and thus the wood and fruit-buds improperly developed. No wall fruit trees suffer sooner from insufficiency of root moisture or show it quicker than Apricots. If the leaves droop and assume a bluish tint, it may be concluded root-dryness is the cause of it. I have seen trees which showed such symptoms one day reconp themselves and even improve in colour by the next after a good soaking of water. If by any means possible an extra effort should be made to do them justice in the way of manurial waterings between now and when the foliage changes, as the rest the trees are having this year, though causing temporary uneasiness to the grower, ought to result in stouter wood and an improved condition generally, and consequently better crops in 1898.—J. C.

**The Loganberry.**—I, like Mr. Clark, was much interested in the remarks made on this American fruit in a recent issue. I procured two plants early in the spring, also two plants of the

Mayberry and two plants of the Strawberry Raspberry. I potted them up in good loam and placed them in cold frames. They have all grown into good plants. I have now planted out the two first in a warm border, and hope next year to get good results. One of the Loganberries bore about a dozen fruits, something like a dark-coloured Raspberry, but longer. These were of a brisk flavour, but very pleasant. The Mayberries have made good growth, but no fruit has shown on them, but on one of the Strawberry Raspberries three flowers have appeared, so that I hope to see the fruit this year. The foliage of the last plant is very pretty. With me it does not seem likely to make nearly so large a bush as the two former.—W. TOWNSEND, Sandhurst Lodge.

FRUIT TREES FOR NORTH WALLS.

In most gardens walls having a northern aspect are only used for the cultivation of the Morello Cherry, which, I think, is a pity, as in many parts of the country other subjects, such, for instance, as choice late dessert Plums, succeed admirably on north walls, to say nothing about Red and White Currants and dessert Gooseberries. Where Morellos are in demand as late as they can be had, it is then necessary to accord the trees a position where they will be shaded from the sun during the hottest part of the day, and such a position with the necessary amount of shade they experience when grown on a north wall. For the earlier supply, Morellos may just as well be grown as bushes as not, for they bear exceedingly heavy crops grown in this form, while the individual fruits are quite as large, and they hang for a long time if netted over. If this is done, the space they would otherwise occupy on the walls can be utilised for the growing of Plums as indicated above. Those who have to provide a large and varied dessert through the autumn months know full well the value of having a few trees of choice kinds of dessert Plums to fall back upon when indoor fruits other than Grapes begin to become scarce. Such kinds as Coe's Golden Drop,



Pear Hessele.

gathered daily; these will be fit for use in a day or two. Left on the trees they are mealy and poor-flavoured. Another very early Pear and little known is the Lawson. This was shown at a recent meeting of the Royal Horticultural Society. It is of good size, not unlike Beurré d'airgeau in colour, but a second quality fruit. It should not be allowed to ripen on the trees. The well-known Williams' Bon Chrétien, a larger and more melting Pear than the Hessele, has of late years taken the place formerly held by the Hessele, and being a larger fruit and ripe at the same season, is doubtless more profitable, but is not so reliable a cropper. The value of these early fruits is that they can be gathered a few at a time, thus prolonging the season. When the bulk is gathered the coolest storage should be given them. The Hessele Pear cannot be classed as first-rate, but it is valuable, as it thrives in positions in which better or later kinds would not give any return. The fruits may be termed below medium size, greenish yellow when ripe, and such spotted with russet, flesh juicy, sweet, and pleasant. In some soils the fruits are gritty near the core, and after housing require to be eaten quickly.

The tree is a pendulous grower, and even when grown for shade or ornament is well worth space in a small garden, as it is a pretty object when in bloom, being as fine as our best flowering trees or shrubs. Most of these very early Pears are grown as standards, but I have seen them made good use of in other ways. They may also be grown as espaliers, or horizontally trained along the sides of walks, and when grown in this way give much finer fruit and of better quality.

GROWER.

**Peach Waterloo.**—I am much pleased with the above variety this season on a west wall. I



Pear Williams' Bon Chrétien.

Jefferson's and Ickworth Impératrice will hang in good condition quite as long as the Cherries if covered with coarse muslin or very thin tiffany as a protection against birds, wasps, and flies while they are ripening. I have frequently gathered Golden Drop in the first week in November, and although the fruits have been

somewhat shrivelled, the flavour has been exceedingly rich and sugary, and, I need hardly add, greatly appreciated when sent to table.

No special culture is needed for growing Plums on such a position, and as a rule, owing to their flowering later than their brethren out in the open and those on walls having warmer aspects, they escape the effects of spring frosts and invariably set good crops of fruit. Last winter I planted cordon trees of the newer varieties of Plums on a north wall as an experiment, and hope to prove a few of them another season. This is an excellent way of clothing a wall quickly, and awkward portions of the wall, such as buttresses, lend themselves to the growing of cordons. Fan-trained trees also give abundant crops of fruit, and a favourite plan of mine is to plant these 12 feet apart, with a cordon between every two trees, not necessarily of the same variety, but so selected that the fruit will ripen about the same time on account of affording them protection against bird and wasp attacks. I have heard and read of early Pears being grown against north walls, but never put the matter to the test; but Plums will and do succeed admirably, and where north walls are of considerable extent and the climate suitable, I would strongly recommend that a portion of the same be devoted to the growing of dessert Plums for late autumn supply. Gooseberries are also a very profitable crop when grown on north walls, and the fruit may be had much later than when grown on bushes. The best way to grow these is as cordons with from three to five branches, which should be trained perpendicularly in the same manner as upright cordon Pears or Plums. Currants of both the red and white varieties bear most profusely grown in the same way, and come in useful after the fruit on the bushes out in the open garden has been gathered. Where autumn-fruiting Raspberries are grown, these late Currants are then doubly useful, as they can then be utilised for tart-making in addition to being useful as an adjunct to the dessert. A. W.

#### POTTING FORCING STRAWBERRIES.

The potting of Strawberries for forcing may be later than usual this year, but there need be no fear of poor crops if the plants are not over-potted. I am aware many growers like to get their plants into the fruiting pots at the earliest possible date, but, after some years' experience, I have come to the conclusion one may pot too early, as if the plants make a second growth and show flowers freely before the winter, they do not force so well the next spring. I find plants potted, say, early in August quite early enough, as they make one crown, this a good one, and the embryo flower-truss is dormant till started for forcing. I know it is an easy matter to thin the crowns, but not in the case of all varieties, as some split up so badly that it is impossible to get one strong crown when the plants are potted up very early. On the other hand, I do not advocate delay, as, unless the plant fills the fruiting pot with roots before being housed or placed in the winter quarters, there will be a collapse if such plants are forced hard, as, having few roots, the crowns will fail to swell when the plants are called upon for increased exertion. I think what may be termed the middle course is a safe one. At one time I was under the impression one could not pot too early, but a severe failure convinced me of my fault, and I am not sure if too early potting with certain varieties, such as Vicomtesse H. de Thury, is not the cause of so many weak trusses. Far better have one or two strong ones, and not a mass of useless ones not strong enough to bear the fruit when set. Doubtless the cause of failure is that the plants have lost vigour owing to the roots having exhausted all the food in the soil. Much depends on the locality where the plants are forced

and, of course, how forced. If not required too early, there is ample time for the plants to grow if potted as advised. If runners are not strong, much better use a smaller pot and get one strong single crown. I have advocated early potting, and I am a great believer in a fair-sized plant and the usual Strawberry pot. I have found there is no gain in coarseness, and would prefer the medium course after a severe trial of the various kinds usually forced. Doubtless my remarks would not apply to plants needed to fruit, say, in January or February, as here the cultivator would need to get the earliest matured plants. I have seen splendid results from very late potting, but much depends on how the plants are wintered and forced. G. WYTHES.

#### SCARCITY OF PLUMS.

This is the general cry in this part of the country, and when we find such varieties as Orleans fetching 20s. per bushel in the market, it is a sure sign that they are scarce. There is no doubt that for several years there has not been so short a crop, as but very few trees in exposed situations are carrying any fruit, while those in more sheltered positions have only a few. Some varieties, however, are much more prolific than others. This is owing either to their flowers not being forward enough to be injured by the late spring frosts, or because they are hardier. On looking over the plantations here, I find that Early Rivers, Orleans, The Czar, Victoria, Stint, Wyedale and Bush or Waterloo are carrying by far the best crops. Some of these varieties are but little known, and on that account are not so extensively grown as they deserve to be. The Czar is a most prolific early kind, of fair size, having a dark skin. It is seldom that the rains cause it to split unless allowed to hang till over-ripe. Where a quantity is required for preserving, this should be largely grown. Stint is rather a new variety of medium size, coming into use early, in August. This with me is most prolific both as a bush and against a wall. Victoria is so well known that it requires no description; a tree or two should always be planted against a north wall, in which position a full crop is generally grown. Wyedale—a variety far better known in the north than in the south—is of medium size and keeps good till quite late in the autumn, often plump till the middle of November. The heavy rains do not seem to affect its hanging like some other of the late kinds. This season, though so unfavourable for most varieties, the trees are carrying a fair crop. Bush or Waterloo is a fine late Plum that seldom fails, and even this season it is no exception. Turning to trees growing against walls, strange to say, those on a northern aspect are by far the best, as many on walls facing south have scarcely a fruit. Coe's Golden Drop, Jefferson's, Washington and some others are particularly conspicuous in this respect. In the southern counties it is advisable to plant such varieties against a north wall, as the autumnal rains do not seriously affect them when ripe. Plums as a rule are fairly hardy, a few degrees of frost taking but little effect on the expanded flowers. When there are from 8° to 10°, as we sometimes have for several hours together, there is but a poor chance of saving them from injury. By planting as before advised, the blooming period is often retarded, so that there is less risk in this respect. A row of Victoria that was shaded by some tall Apple trees is now carrying a full crop, while trees more exposed have scarcely a fruit on them. Plums are far more useful than Pears, as they may be used for a variety of purposes; therefore it is well to allot the choicer kinds positions on walls in preference to the latter, as they usually give a greater return for the labour expended upon them. Most of the hardier kinds may, however, be depended upon to give a supply of good fruit when grown as bushes and protected by a belt of trees to ward off the cold winds. H. C. P.

Busted Park, Uckfield.

#### TREATMENT OF YOUNG VINES.

REFERENCE was lately made to the class of borders that market-growers have to be content with, and which answer surprisingly well. There is no disputing the fact that the treatment of young Vines varies considerably, and it is equally certain results are also most variable. I hold that planting strong canes, or any supposed to be large enough to produce bunches the first season, is quite a mistake, yet it is often done. Even as supernumeraries they are a failure. If purchased they cost too much, and in any case they rarely give enough good bunches to pay for the trouble taken with them while the start, as far as forming stout canes is concerned, is frequently deplorable. Vines do not move well out of 10-inch pots, but they might be made to produce a crop if kept in their pots and liberally treated at the roots, and that is what I would do with them. I have long advocated keeping supernumeraries, or those that are to be cropped heavily for two seasons or so, well away from those intended to be permanent, because they greatly interfere with their progress. Supernumeraries ought not to be planted at all; they are not wanted. All that is required is to make a good start with permanent Vines, and these may then be freely cropped the following season. Pampered young Vines do not often develop into really good serviceable rods, and may easily prove the opposite. A gross start—such a result when extra strong canes are planted and duly cut down—is objectionable. Either future progress is somewhat on a par with the commencement, long-jointed, pithy canes resulting or else they cease growing so soon after the first burst, waiting for further supplies of sap from roots which have to be formed, that the wood becomes hardened and not much further progress is made that season. Short, well-ripened canes, not much larger than the stem of a clasp pipe, and strongly rooted in either 5-inch or 6-inch pots, are, in my opinion, much the best for planting in all positions where the sunshin can reach them, and no Vine ought to be planted, where it can possibly be avoided, in a dark place. There are no stagings along the fronts of market growers' houses, no planting between coils of hot-water pipes and from walls, and no bringing canes through from the outside. These difficulties private gardeners have to contend with, and they greatly interfere with a good start being made. If long canes must be planted, by all means plant them, but I have a great objection to long, naked stems, and like to have my Vines on a flat border where they do not suffer from contact with hot water pipes and are favoured with much of the light and sunshine going. A few words as to

#### WHEN TO PLANT.

October is given as a good time to plant ripened canes, as in this case the Vines have chance to form a few fresh roots before they go to rest, starting stronger in the spring accordingly. I have nothing to urge against this practice, and little or nothing to say in favour of it. If the border was ready and the course clear then I might plant in the autumn, but it has usually answered my purpose to plant in the spring. Supposing the young Vines were raised in the spring previous, duly topped, as they should be when about 2 feet long, and arranged outdoors all the summer, these would be harvested late in the autumn, or cut back to within 3 inches of the pots, and wintered in a cold house or frame. Early in February they would be started into growth in a temperature of about 55°, and directly the buds commenced moving, the time will have arrived for planting

When turned out of pots, these small Vines should be found particularly well furnished with roots compared with their size, and these ought to be washed or shaken clear of soil so that the roots may be spread out flatly and evenly in the soil. Thus treated the young Vines start moderately strongly and keep growing from the first, developing into fine fruiting canes the same season. If larger Vines were planted, I would yet advise cutting them down to near the ground, so as to have an even swelling throughout and no stunted lower portions of stem. Vines raised from eyes started, say in January, may be planted the following April or May with a good prospect of their becoming strong enough to give bunches during the next season, but not if Tomatoes were in full possession of the house at planting time. The "cut-backs" planted in March and grown from the first in gentle heat more than hold their own with the Tomato plants on each side of them, and eventually gain the upper-hand.

Market growers crowd their rods more than thought desirable by private gardeners, but they do not invariably plant the young Vines thickly. They have to study the Tomatoes. The majority of their houses are span-roofed and the Vines are planted on both sides. If disposed at a distance of 4 feet apart, there is good space for a row of Tomatoes midway between for two years, and half rows during the third season. The Vines are not arranged exactly opposite each other, but are triangled; this does not interfere with the lines of Tomato plants, because the pathway is in the middle. Eventually each rod is taken clean over an arched trellis, or from one side to the other, and they are then not more than 2 feet apart. In some instances the rods are not taken any further than the apex of the roof, and in this case a second cane is laid in after Tomatoes can no longer be grown in theinery. Personally, I prefer the arched trellis, or what amounts to be the same thing, training up longitudinal wires passed through long eyes screwed into the sash bars of the roofs and across Bamboo canes—a decidedly cheap and convenient arrangement, obviating the use of high steps and keeping the Vines well away from the glass at the hottest part of the roof. So far I am in agreement with the authorities, except perhaps with regard to the homely trellis. Where the difference comes in is in the matter of

#### STOPPING AND PRUNING.

In Mr. Barron's admirable treatise on the "Grape Vine" occurs the following passage: "Once fairly started, young Vines are all the better for the first summer, to be allowed to grow and ramble pretty freely, with as little stopping and pruning as possible. The more leaves and shoots developed the more roots produced and the stronger the foundation laid for the future plant." The writer of this paragraph is far from being alone in his views upon the free growth of young Vines, but I have ways fought against it, though admittedly in minority, and the more experience gained the more thoroughly convinced I become that Mr. Barron and those who follow the lines he has laid down are wrong. Fortunately, the average market grower is not tempted to allow his Vines to "ramble pretty freely," for the simple reason that his rent-paying Tomatoes would suffer from undue shade. Why allow so much growth to form only to cut it all off again? His rambling growth may be the means of promoting the increase of roots, it does so in fact, but they are of the wrong character—course and rambling, whereas it is abundance of root fibres that I prefer to find, as these and these only conduce to the formation of stout,

short-jointed hard canes, which will last as long as those in charge may desire them. This unrestricted growth is so much wasted vigour, also leading to a loss of fertility in the border and in particular a loss of time. The idea reads prettily, but there is nothing in it.

In March, 1896, I planted about fifty small cut-backs, and grew Tomatoes in pots between them in the way usual among market growers. Out of these three only are not carrying bunches at the present time. The strongest are furnished with six bunches each, or weighing on the aggregate not less than 9 lbs. weight; others have four bunches each. In addition to producing these bunches every Vine has formed long leading canes that any gardener might be proud of, the older portion of the rod also swelling satisfactorily. Those planted on the opposite side of the house in 1895, and cropped equally heavily last season, are now furnished with an average of twelve bunches each, these also being full of vigour and forming strong leading canes. There is nothing remarkable about the border, as this was only so much manured and trenched ground, prepared with neither more nor less ceremony than many gardeners bestow on their Strawberry beds. I shall be disappointed next season if these older Vines fail to mature less than twenty bunches each. I attribute this success largely to having never allowed the Vines to grow to waste. Timely stopping has invariably been practised, this applying to both leading and lateral growths. If the young Vines or the leaders on those planted longer are weakly, they are topped when about 4 feet long, while those that grow strongly are topped at a height of 5 feet to 6 feet. All lateral shoots from these young canes are stopped beyond the first leaf, and the breaks from these also just beyond the first leaf. Treated in this way the canes swell evenly and strongly, but there is no premature loss of primary leaves as frequently happens when the lateral growths extend and swell. It is the first formed leaves that do the best work, and only on stopped Vines do these develop properly and survive to the end of the season. All the winter pruning required in the case of one-season canes is to shorten these lightly, or only to the extent of removing the ends that have pushed out growths from buds that should have remained dormant till the following spring. I find the Vines carrying three bunches were shortened to within 3 feet to 4 feet of the ground, and those more heavily cropped were left to a length of about 5 feet. Those too weak to bear fruit were cut down to within 6 inches of the border. All have 6 feet leading canes of fresh growth. W. IGGULDEN.

**Melon notes.**—Melon Gunton Orange will not set with me. Is it a very shy-bearing variety? My attention was called to it by several notes in THE GARDEN. All the other sorts, like Hero of Lockinge, Conqueror, Scarlet Premier and others, thrive well and set freely. The fruits of Gunton Orange turn yellow one or two days after setting. The plants of Gunton Orange are, I think, the strongest in the whole house. Frogmore Orange, also grown for the first time, cracks badly and will be discarded. I fancy that the best white-fleshed variety is still the old Hero of Lockinge. Which is the best scarlet-fleshed Melon?—R. K., *St. Petersburg*.

**Nectarine Early Rivers.**—This new Nectarine is this season much finer, the quality being excellent. My first fruits were really earlier this season than last. I had a nice dish on the 24th of July and gathered daily until the 7th of August. The fruits have been remarkable for their splendid colour in addition to their size. There can be no question as to the earliness of

Early Rivers, and I have trees on west and south walls, in each case planted side by side with Lord Napier, a favourite variety with me. The newer variety is equally good, and as regards earliness of great value, and deserves all that was said in its favour when sent out. Those who have a demand for fruit at this season may with confidence plant Early Rivers where Nectarines do well, as it is a good grower, makes splendid wood, and with me does not crack like some kinds. It sets very freely on both aspects named. My trees are dwarf trained in both cases.—G. WYTHES.

**Fruit crops on the south coast.**—This has been a most disappointing year for fruit growers—at least, in this locality, for the promise of spring, as far as abundance of bloom was concerned, led me to hope that a record year was at last to smile on the fruit grower, but cold winds, rains and late spring frosts proved too much for the tender bloom, or rather for the embryo fruits, as Plums, Cherries and other stone fruits appeared to be setting remarkably well. They did not swell away kindly, and soon began to assume a sickly yellow look and fall to the ground. A more complete failure of all hardy stone fruits I never remember. Pears flowered magnificently, but there is a very scanty sprinkling, the only kinds that have anything like a crop are the small common sorts. Apples that, fortunately, did not flower until more genial weather prevailed are a good crop and promise to swell to a good size. Bush fruits have been thin crops. Strawberries that are grown in large quantities about here were plentiful, but very soon over, and growers did not realise any of the fancy prices they were expecting in Jubilee year, for after the first week of gathering prices dropped lower than they usually do. The late frosts cut off the earliest and finest blooms. Sir J. Paxton still holds foremost place as a market sort, Royal Sovereign not travelling so well.—J. GROOM, *Gosport*.

#### RICH, BUT TENDER APPLES.

I was pleased to see in Mr. Iggulden's remarks on the Apple crops in certain counties mention made of that old highly-flavoured, but now seldom met with, dessert Apple Margil. Many years ago this Apple was grown as dwarf bush trees in an Essex garden in which I was employed. For my part I prefer it to either Ribston or Cox's Orange, but the tree requires good culture, otherwise it usually becomes affected with canker. The Paradise stock suits it best. The trees in question occupied a sunny position and were planted in warm, well-drained soil, having been lifted 2 years after planting to keep the roots close to the surface. In gardens where this and other small, but deliciously flavoured Apples are esteemed, it would, I think, be a good plan to grow them by themselves, and give them this special treatment, as they seldom can be induced to yield in a satisfactory manner under rough and ready treatment. In this section may be classed that at present comparatively little-known conical Apple American Mother. This Apple has a somewhat soft flesh, but will keep firm and in good condition for a considerable time after it is gathered, but it must have a warm, well-drained root-run to do it justice. Fruit well exposed to the sun will sometimes take on a beautiful streaked appearance. The Melon Apple of America, a December to March Apple, much larger than the two preceding sorts, pays for special treatment and position. It has a rich, soft, melting flesh, and must be left on the tree as long as possible. Baddow Pippin, also known as d'Arcy Spice, is well worthy of any trouble which may be bestowed upon it. I have heard a wall recommended for these rich, but tender kinds, but my experience is that wall culture for Apples of any kind is an unsatisfactory undertaking, although well-laden trees are now and then met with. An east wall can scarcely be called suitable, and on either south or west aspects in hot summers, and particularly where the subsoil is not of a marly nature so as to retain moisture, insects, in-

cluding red spider and American blight, are almost sure to attack them. Some may say water can be artificially supplied, but this is easier said than done, where work, as is the case in most gardens at this particular season of the year, is too plentiful. Supposing the roots never to suffer from lack of moisture, burning of the fruit by the sun has almost invariably to be contended with in a greater or less degree. I have a tree of Annie Elizabeth occupying a hot, sunny aspect on a west wall, and this summer, just as the pips were forming, the exposed side of nearly every fruit on the tree was burnt as with a hot iron, all fruits so affected being, of course, useless.

C. C. D.

#### STRAWBERRIES FOR A MIDDLESEX GARDEN.

Will you kindly tell me what Strawberries you consider most suitable for our garden? I rather fancy Royal Sovereign, President, and Noble.—M. I.

\* \* \* If the soil is not at all heavy you will require a free-growing kind, and as you say in your note you fancy Laxton's Royal Sovereign, we do not think you could do better. It is a good flavoured variety with grand cropping qualities. We certainly do not advise Noble in addition to Royal Sovereign, as owing to the latter named being as early as Noble, quite as prolific and a better fruit, why grow an inferior variety? Noble previous to the advent of Royal Sovereign was valuable on account of its earliness, but with Royal Sovereign equally early there is no need to grow both, Noble being a softer and poorer fruit in comparison. Royal Sovereign claims Noble as one of its parents, King of the Earlies, a very rich early fruit, being the other, and as it possesses the vigour of Noble it will do well in an ordinary garden soil. Royal Sovereign is not at all expensive. President, a grand old variety, is one of the most useful Strawberries grown, on account of its good flavour and solid fruit. It is a midseason variety, fruits large, and colour very bright. It rarely fails, but, as noted in the article referred to, the best fruits are obtained from young plants. No matter what variety is grown, it is well to plant early, using good material and giving attention to the preparation of the soil. Strong plants are a little more costly at this time, but they give much better returns. Many of our Royal Sovereign plants carried 3 lbs. of fruit each. At 1s. 6d. a lb., these well repaid for labour, as the land after the Strawberries were cleared off was in splendid condition for the next crop of a different nature.—Ed.

#### STRAWBERRY LATEST OF ALL.

I would strongly advise "R. D." not to discard Latest of All Strawberry, and to give it another trial, as on heavy land it should do grandly. There may be something wrong with the soil, or drought may have been the cause of failure. This year I have some hundreds of plants, and they have given splendid crops of large fruit and first-rate flavour. My plants were mostly grown on north borders. The soil is light and none too rich. I am unable to say why "R. D.'s" plants should be so unsatisfactory, but a dozen is a small number, and in a lot of 500 I have had no fungus of any kind, and with such a dry season I fail to see why "R. D.'s" plants should be so affected if they were well rooted. Possibly Latest of All will not be so good the first season, as it is not a strong grower. It makes few runners, but gives very fine fruit the first season and in quantity the second. I note at page 75 "A. D." gives a splendid character to Latest of All, and it deserves it, as during the month of July it has been invaluable. For years I grew Laxton's Jubilee for late use. This in wet seasons mildewed badly, and was not equal in quality to the Pine section, which fruited at the same time. With the advent of Latest of All I have had no difficulty. I am pleased to see additional testimony at pages 95 and 96, and to see "J. C.'s" and Mr. Hagon's notes on

the value of this variety. It certainly resembles British Queen in having green or unripened fruits. On the other hand, I have this season noticed other kinds known as good-shaped vary greatly in this respect, especially some of the earlier kinds. To some extent the severe frost in May would be answerable, and the severe drought after in this part of the country may have affected the later fruits. I intend to double my stock of Latest of All this year, but plants will be late, as runners are difficult to procure.

G. WYTHES.

#### PEACH BLISTER.

THERE is invariably some of this to be seen on open-air trees of Peaches and Nectarines every season, but it is not often the attack is so severe as it was this spring. Experts inform us that this blister is caused by a fungus known as *Exoascus deformans*, and give full descriptions of the disease accompanied by supposed remedies. The descriptions are correct enough, but the remedies given are doubtful. What mystifies gardeners is the fact that the leaves on trees under glass, whether the houses are heated or not, are never affected by the disease, nor have I ever observed it on trees under wall cases. It is also a noteworthy fact that trees moved from under glass to open walls are not affected by the blister for at least two years, and very little of it is noticeable on trees at Longleat that have been moved into the open still longer. Undoubtedly cold cutting winds are responsible for much of the mischief done, these, it may be, damaging the tender young leaves and rendering them an easy prey to the disease. That the disease germs are resting on the trees in readiness for an opening would appear only too evident, or how else are we to account for the comparative immunity from attack enjoyed by those trees moved from under glass? It is further plain enough that they are powerless in the case of strong healthy foliage, or how comes it that well-protected trees do not suffer from the disease? I have never had any experience with carbonate of copper and the like on Peach trees, but if any of the readers of THE GARDEN have sprayed their trees both before and after the flowering periods with any of these poisonous preparations for combating the spread of fungoid diseases, they will render good service by publishing the results. I have most faith in screening the trees in the spring from cold easterly winds by means of blinds made of frigi-domo for choice, and, failing these, with doubled or trebled fish-nets hung loosely over the trees, keeping them at a safe distance from the walls by the aid of long rods. Glazed copings with running blinds are the best form of protection, as in this case no harm will result by leaving these open all day long while the cold winds prevail. It is worthy of mention that many Peach and Nectarine trees against south walls in the west of England lost nearly every leaf from this blister, yet they have recovered surprisingly, being well furnished with fresh, healthy young wood, while the crops are quite up to the average. In one garden not far from Bridgewater Peach trees on a south wall were badly attacked by blister, while those on a south-west wall, and therefore less exposed to chilling easterly winds, only suffered slightly from it.

W. INGULDEN.

**Peach Early Grosse Mignonne.**—The true early variety of this fine Peach is now—August 7—ripe in an unheated house. It is a fine showy fruit of exquisite flavour, the deep pale flesh slightly streaked with red. I have not a heavy crop, as the tree has grown rather too strongly,

but as it has to be shifted this autumn and is healthy and well ripened, I hope the slight check given will induce it to form more fruitful wood. It comes in very useful just after Hale's Early, to which it is much superior in point of quality.—H

**Plum jam.**—It may not be generally known that the best of Plum preserve is made from under-ripe fruit. Many people are so anxious to secure their fruit in a perfectly ripe state, and no doubt Plums are often what is termed dead ripe when the jam is made; consequently it is never so good, nor does it keep so well. A gardener I knew being without Green Gages himself was forced to buy for preserve-making. When the fruit was sent home he found it to be in an under-ripe condition, and was afraid the jam would not be satisfactory, but to his surprise when made it was delicious, after which he always endeavoured to gather Plums required for jam in an under-ripe rather than an over-ripe condition.—C. C.

#### SHORT NOTES.—FRUIT.

**Melon Ingestre Hybrid.**—I have grown the Melon for the first time this year, a friend having given me a few seeds of the true stock. I grew the plant on the cordon system, allowing two fruits to plant. The skin is of a bright golden colour and the flavour was excellent.—DORSET.

**Apples and Pears for pots.**—I should be very glad to learn the names of a few sorts of Pear and Apples considered the very best for pot culture. Considering our short summer, the sorts ought to be rather early.—R. K., *St. Petersburg.*

## GARDEN FLORA.

### PLATE 1132.

#### UTRICULARIAS.

(WITH A COLOURED PLATE OF *U. LATIFOLIA*.)

THE species of this singular genus are worth place in every collection of plants, their curious flowers having much the appearance of those of some Orchids. The Bladderworts thrive best in a mixture such as most Orchids like, viz. fibrous peat and a little sand, and are increased by separating the little bulb-like appendage that adhere to the stems and roots during summer. They do best when hung up to the roof. During growth they require a good supply of water with somewhat drier treatment when at rest. The following are the best known kinds:—

**U. ENDRESI.**—This plant should be grown in shallow suspended basket in a little peat and Sphagnum. It is deciduous, and in winter should only receive sufficient water to prevent the rhizomes shrivelling. It will winter well at the coolest end of the stove or East India Orchid house. As soon as it starts into growth it should be suspended from the roof at the warmest end of the house and kept constantly wet until the flowering is over and the foliage begins to decay. It should not be fumigated with tobacco at any time. The flowers are pale lilac.

**U. MONTANA.**—In this the flowers are pure white with an orange palate, and larger than those of U. Endresi. The temperature of a Cattleya house seems to suit U. montana. U. Endresi requiring a little more heat.

**U. HUMBOLDTI**, given a first-class certificate by the Royal Horticultural Society on April 12, 1892 is distinct. The flowers are larger than those of U. montana, of a pale lavender-blue colour, the spikes long and slender, the foliage broad and of considerable texture.

**U. LONGIFOLIA.**—This, by mistake named U. latifolia in our plate to-day, was also certificated on April 12, 1892, by the Royal Horticultural

\* Drawn for THE GARDEN in Messrs. Sander's nursery, St. Albans, by H. G. Moon. Lithographed and printed by J. L. Goffart.



1192. *Delphinium* *latifolium* L. var. *roseum* G.



Society. It is quite distinct from U. Humboldtii the flowers smaller, of a pale mauve shade, spike short and erect, foliage long and narrow.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**AUTUMN CAULIFLOWERS.**—As the Pea season draws to a close a good succession of Cauliflowers proves most valuable in affording a variety and maintaining the supply until the early Broccoli is ready. For this purpose Autumn Giant is by far the best, as after it once gets a start and given good ground it generally grows freely during the brief summers, and turns in at the season required. The earliest batch of plants will have arrived at that stage when an occasional dose of manure-water will prove of great assistance, as it not only stimulates growth, but the produce is of the finest quality when the plants are helped in his way. As a further means to secure this, frequent surface hoeings should be resorted to, though they may not be required for the destruction of weeds, but these, like all other crops, are greatly improved when a loose surface is maintained between the plants. This crop often follows early Potatoes and other things as they are cleared off south borders, for the reason that ground is scarce at the time the plants are ready for putting out, but it does not always prove a suitable position during a hot, dry September, as the flavour of the heads is not so mild, and they do not last long in a good condition. They may be preserved, however, for several weeks after they are ready for use by lifting them carefully and burying the roots rather deeply under the shade of a north wall, though it is not recommended to disturb the plants if it can be avoided during bright sunshine, or when the ground is very dry. Rather take advantage of a dull showery day, when if a good watering is given afterwards the plants will not feel the effects of removal so much.

**BROCCOLI.**—These together with the different Kales will now be making satisfactory progress, and a final hoeing should be made between the rows, in readiness for moulding the stems up a few inches before the plants become too large, when the work can be done more easily without damaging the leaves. It is not too late even now to put out more Kale of the dwarf curled varieties. These will make sturdy little plants before winter, and form a good succession to those santed earlier. Indeed, I have often found that small plants put out now remain uninjured during the most severe winters, when taller plants with smaller stems have collapsed. Where a late sowing was made of the dwarf varieties of Savoys and other things, a few hundred plants put on a spare piece of ground will be almost sure to come in useful before spring, and the site will be available by the time it is required for spring cropping. Such plants may be put out rather thickly and may be used as greens at any time, but it would be useless to trust to Broccoli in the same way, unless it should be a few late Model, if the plants are well grown, and hardly sufficient late kinds were put in at the right time. I have just finished planting good breadths of Little Pixie and Hardy Colewort Cabbage. Both of these are most useful winter crops, and as it is not desirable to retain the plants for affording sprouts in the spring, close planting is resorted to, and they are pulled up as required for use. This is a capital crop to follow second early Potatoes, and the plants may be put in as these are lifted without the labour of manuring the ground for them. Little Pixie is somewhat smaller and considered not quite so hardy as the Colewort named, and on that account should be used first. The plants are put out two foot apart, with 15 inches between the rows.

**SPRING CABBAGE.**—It is most important that good seed beds filled with healthy plants should be in all gardens at this season, so that the desired number of plants may be put out next month. As before explained, it is not wise to trust to one sowing to produce all the plants re-

quired, and at least three lots of seed should be put in. The last sowing is generally valuable for producing plants for spring planting, and the seed should be put in towards the end of the present month. If the young plants grow freely, it is a good plan to prick them out about 6 inches apart, burying their stems up to the seed leaf and treading the soil firmly round them; they are then better able to withstand severe frost, and much time is saved. Recent showers have greatly assisted the seeds to germinate, but unless the soil is kept in a moist condition by rain, watering the beds must be resorted to, or growth will be slow and the plants become stunted. Some well-decayed manure has been worked into a piece of ground ready to receive the first batch, by which time it will have become settled and in good condition when the plants are ready for putting out. Dust the seed-beds occasionally should there be any sign of fly attacking the plants.

**LETTUCE AND ENDIVE.**—Sowings of both these are made at the same time as the above, and practically treated in the same way. It is always desirable to have plenty of plants to draw from, not only for autumn planting, but for standing through the winter to be planted in warm situations next March. Another sowing will be made shortly of Hick's Hardy White and Lee's Immense, which will remain undisturbed until spring. Thin sowing is very necessary, as when the young plants come up too thickly they often decay owing to wet weather, and more are lost in this way than through frost. South or other warm borders will have to be prepared for pricking out a quantity of each at once. It is not necessary to dig in manure if the ground is in fairly good order, but after forking it over it should be made rather firm by treading, and a good dusting of wood ashes afforded on the surface before planting commences. The firm soil will prevent to some extent grubs attacking the roots, while the wood ashes will assist to ward off slugs. Any pits or frames that are available should be got ready to receive as many plants as possible. Fresh soil should be placed in these if necessary, so that the plants are brought well up to the glass. Where there is plenty of frames, some of them may be filled at once with young plants and the lights only used to protect them during severe frosts; others, of course, will be required for the storage of larger plants, which will be lifted and stood close together on the approach of bad weather.

RICHARD PARKER.

### FRUIT HOUSES.

**POTTING FRUIT TREES.**—Pot fruit trees from which the crop of fruit has been gathered should be attended to without further delay, whether it is in the shape of a shift into larger pots or tubs, or root-pruning and top-dressing that is needed. The potting of these trees is best done while the trees still retain their leaves, as new roots are then more quickly emitted, and, as a natural sequence, the trees recover in a much shorter time, particularly when they have to be severely dealt with. Trees which are now in medium-sized pots will benefit by having a shift into larger-sized ones, provided they are already well rooted and do not make gross growth. Those which had a shift early last spring will merely need knocking out to ascertain whether the drainage is in good working order, and perhaps to add a little top-dressing if the surface soil needs removing. Trees which are already in the largest-sized tubs or pots are more difficult to deal with, as no shift can be given these. If healthy, an annual root-pruning is very beneficial, especially in the case of pot Figs, and by these means the balls can be kept within bounds, and the benefit of a little new soil can be given them at the same time. I am no advocate for severe root-pruning in these cases, and merely advise the removal of all thick, fleshy roots found coiled round the outside of the ball and among the crocks, retaining all the small fibrous ones. By doing this, and

patiently picking out as much of the old soil from among the roots as is possible under the circumstances, room can be found for the introduction of a little new soil, from the crocks upwards, and if this is carried out annually, trees of this description can be kept in a healthy bearing condition for a number of years. The old mulchings and top-dressings applied while the trees were in full growth will be full of roots. These must be sacrificed, and all roots, soil, &c., must be removed down to the original level or a little below it if possible to allow of a little new soil being applied. In each and every case the balls of roots should be in a thoroughly moist condition before being potted; therefore, a good soaking of water should precede the operation. Use clean pots, tubs and drainage, and cover the latter with fibrous pieces of turf to prevent the finer particles of soil from getting amongst and choking it up. Be careful to ram the compost firm in every case, also when top-dressing, and immediately after well water to settle the soil among the roots. Trees which have had to be severely handled will be best put into a cold house and shaded for a time, and have an occasional dash overhead with the syringe to prevent the foliage drooping. Others which have been merely shifted or top-dressed may remain where they are outdoors, but the precaution should be taken to prevent worms from gaining ingress at the crock holes. When many trees of this description have to be operated upon, a general survey should be made to ascertain the number, and then a pretty good estimate will be gained as to the quantity of compost that will be required. As but limited quantities of this will be needed, comparatively speaking, it should be of the best description. Good fibrous loam of a calcareous nature is the best for pot trees. Loams containing but little fibre may have wood ashes, old plaster or lime rubble pounded up fine mixed with them to ensure porosity, bone-meal being added also at the rate of a 10-inch potful to every barrow-load of loam. This is the only manure I advise being used with the compost, as the requisite amount of feeding necessary can always be applied from the surface during the season of growth.

**POT VINES.**—Young Vines intended for planting or for cutting back and growing on another season for forcing early the following year should now be sufficiently advanced to allow of the pots being raised out of the plunging material. In a few weeks' time they may be taken outdoors and placed in a sunny position, either against a wall or hedge to finish the ripening of both wood and foliage. In the meantime see that they get ample supplies of water, and the same when placed outdoors. If trained to stakes fixed in an upright position the canes will need no further support when removal takes place, but if trained to wires, then they must be either fastened to the wall or tied to the hedge. Should the hot weather continue, boards placed in front of the pots or a little loose litter worked round them will keep the roots cool and considerably lessen labour in the way of watering.

**POT STRAWBERRIES.**—The early potted plants are making good progress, the soil being already well filled with roots. In a short time feeding, in the shape of weak guano water, may commence, or, where liquid manure is plentiful, this may be given instead. Keep all runners suppressed, and turn the pots round frequently, if standing on ashes, to prevent the roots catching hold. As growth proceeds, give each plant more room by thinning out, and syringe them freely towards sunset when the day has been parching hot. Successional batches should be accorded more room as they make more foliage, and attend to them in every particular as advised for the early lot of plants. The latest lot of all should be potted, if that has not already been done, and give the plants the benefit of an open space where they will experience full sunshine and a free circulation of air. If enough plants have been secured both for pots and planting, a line or two of the kinds which find favour for forcing should be planted

by the sides of walks or in any convenient spot, for affording runners for pot work another year. In order that these may grow strongly, so that plenty of robust runners will be afforded in the spring, the ground should be in good heart and quite free from shade.

**FRUIT ROOMS.**—The present is a good time in which to carry out any alterations and repairs, also the cleansing and painting of these structures. In addition to whitewashing walls and ceilings, the shelves and all woodwork should be well scrubbed with strong soda water, to destroy all mould germs which may be, and are very likely, present, if any fruits were allowed to decay last winter or spring. After this, any painting that is necessary may be done, and, if carried out at once, the same will become hardened and the strong smell have passed away before the general ingathering of the fruit takes place. Grape rooms should also be overhauled and cleaned in the same manner, and if any structural alterations are necessary they should be carried out forthwith.

**FRUIT GATHERING.**—Much time will be taken up now and for some time to come where fruit-growing is carried on to any extent, whether the produce is consumed at home or marketed. In addition to Peaches, Nectarines, and Apricots, which should be looked over every other day, Plums are now ripening, and Morello Cherries should be gathered for bottling. Plums are best gathered fresh from the trees, as if kept long they become unwholesome. The first-named fruits will take no harm if laid out thinly on an airy shelf in the fruit room, and will, in fact, keep in good condition with their flavour unimpaired for nearly a week. The early kinds of Pears, such as Doyenné d'Été, Citron des Carmes, and Summer Beurré d'Arenberg, are improved if gathered a few days before they are ripe and placed in the fruit room. Souvenir du Congrès, Williams' Bon Chrétien, Clapp's Favourite, and Beurré de l'Assomption should also be treated in like manner, but these are much later than usual this season, and will not need gathering yet. The earliest varieties of Apples, especially the dessert kinds, are best gathered direct from the trees, as they lose flavour and go flat if stored. Apples for market must be gathered before they become too ripe, otherwise they bruise badly if they have to be sent any distance, and a considerable loss in value is the result.

A. W.

## TREES AND SHRUBS.

### HICORIA PALLIDA.

*HICORIA PALLIDA* is nearer to the Nutmeg Hickory than to any other, but while the Nutmeg Hickory (*Hicoria myristiciformis*) has many characters which ally it to the Pecan and Bitternuts, this has characters which show close affinity to the White Hickory. The sterile flowers of *Hicoria pallida* are only from the base of the shoot of the year, while in the Nutmeg Hickory they are from separate lateral buds as well. The twigs, which are even more slender than in most forms of the Pignut, are purplish brown in colour and usually smooth, although some collected in South-western Georgia are tomentose toward the tip around the base of the terminal buds. The oval buds are sharply pointed: the lateral buds are similar to the terminal ones in shape and general appearance, but are somewhat smaller. The fruit, as in most of the Hickories, varies much in size and shape, being sometimes almost globular, and again nearly pear-shaped.

From its habit *Hicoria pallida* might be called the "Black Jack" of the Hickories, for it seldom exceeds 40 feet in height, and is often not over 18 feet or 20 feet, with a proportionate trunk diameter of from 8 inches to 15 inches. The very slender upper branches are erect and closely crowded, forming a narrow,

oblong crown; but the lower ones droop so low, that on isolated trees their extremities are only a few feet above the ground. The trunk, too, is always short, even when the tree is growing under the most favourable conditions, most of the branches spreading from a point only 15 feet or 20 feet above the base of the trunk. The grey bark is thick and firm, with deep and rather broad fissures separated by broad ridges, its general appearance being like that of the White Hickory, but rougher. In the summer, when in foliage, it bears a close resemblance to the White Hickory; in the winter the slender twigs make it more nearly resemble the Pignut. The heart-wood is brown in colour; the sap-wood nearly white; and I was told by persons who had used the wood that while much inferior to the White Hickory in those properties that make good hickory, it is equally as good as that of the Bitternut. The tree, however, is too small and too uncommon to be of importance economically. Even in the mountains of North Carolina, where I have found *Hicoria pallida* most common, it is exceedingly local, occurring at widely separated places, seldom more than a dozen trees being found at the same station. It prefers a poor, dry soil, and I have usually found it on sandy soils, although not always. In the mountains of Virginia and North Carolina it is associated with the Red Oak, the Rock Chestnut Oak, the Pignut and White Hickory, and ascends in the mountains of North Carolina as high as 4000 feet above sea-level. In South-western Georgia it is found growing with the White Hickory, Post Oak, Dogwood and Long-leaved Pine on a good loamy soil underlaid with marl and limestone. In Eastern North Carolina it is found on the littoral sand dunes at Wilmington, growing with the Sand Oak (*Quercus Catesbeii*), the Spanish Oak and the Red Cedar; while near by are the Water Oak, Live Oak, Laurel Oak and Bays. On the sandstone ridges of Central Tennessee it occurs with the Scrub Pine, Chestnut, and with the Oak and Rock Chestnut Oak. Its distribution, so far as I have observed, is from Southern Virginia and Eastern North Carolina to Middle Tennessee and South-western Georgia, but it is probably more extensively distributed, and should be looked for in Eastern Kentucky and Northern Alabama.

This tree was first discovered in the spring of 1895 near Chapel Hill, North Carolina, where, after two seasons' search, I have been able to find only three specimens. The summer after discovering it at Chapel Hill, while examining on horseback the forests of the western portion of North Carolina in the preparation of the description of the woodland of North Carolina in Bulletin No. 6 of the North Carolina Geological Survey, I found this tree in several other places in that State. The following spring it was found in South-western Georgia and Eastern North Carolina, and more recently in Tennessee. Having no good description of the Nutmeg Hickory or specimen for comparison, for a long time I considered *Hicoria pallida* to be that species, or at most a variety of it. The Nutmeg Hickory, however, does not occur in North Carolina, although indirectly credited to this State in the recently published "Nomenclature of the Arborecent Flora of the United States."

From what is now known of it, *Hicoria pallida* seems to be another localised South Appalachian species.—WILLIAM WILLARD ASHIE, in *Garden and Forest*.

**Pavia macrostachya.**—This so resembles a Horse Chestnut, that most people think it to be that. It is now in bloom in our pleasure-grounds

(middle of August). It is quite a small bush and not in a favourable position. To those who have not room for strong growing subjects this is well adapted, as it is not fast growing. I remember seeing a fine plant of this in full bloom in the grounds at Croome Court, Worcestershire.—DORSET.

**Ceanothus Gloire de Versailles.**—As a shrub to be grown in ordinary positions there is none amongst the Ceanothuses that has proved more useful than this. Some of the species are very tender and can only be grown against a wall, and even then are killed by such frosts as those of February, 1895, but *C. azureus* will stand on the hardest winters if the ground is covered with a thick layer of dry leaves. It is from this species apparently, that the variety *Gloire de Versailles* has been derived, but, compared with the species it is a more robust grower and has larger racemes of flowers, and is, indeed, in every way superior. There is now a large group of it in flower at Key and the feathery racemes of bright blue flowers are very pleasing, not only for their own beauty, but also because they are so different from other shrubs in flower now. It requires to be pruned pretty hard back each spring; a hard winter will do this, but during such winters as the two last it is only the soft tips of the shoots that are killed. Close pruning encourages a compact and shapely habit, and even with it our plants are 4 feet high. It strikes quite readily from cutting.—B.

**Spiræa Bumalda var. Anthony Waterer.**—The most important group of the *Spiræas* that flower in July and August is the one that constitutes the japonica (or callosa) group. To it, among many others, belong the fine varieties *ruberrima glabrata*, and *Bumalda*, but it is to the variety *Anthony Waterer*—a sport from *Bumalda*—that the first place must be given, for none equals it in its richness of colour. Its name alone suggests a high degree of merit, for it was sent out by an amateur named after the late Mr. Waterer, of Knap Hill, than whom a more exacting critic of tree or shrub has never lived. From *Bumalda* itself it does not differ in habit or foliage, having the same neat compact habit and dark green toothed leaves, and showing the same peculiar tendency to variegation. Its flowers are of a richer, brighter red, and lose much of the purple tinge that belongs to the ordinary *Bumalda*. In 1895, in the early part of the season which was very dry and hot, it lost a good deal of its brightness of colour, and it was not till later, when the rains came, that it showed its great superiority. But last year and this it has been very fine and realises all that has been anticipated of it. If the old blooms are removed as they fade, it will keep in beauty till October.

**Calophaca wolgarica.**—Although this shrub has been in cultivation more than 100 years, it is only rarely that it is to be seen now-a-days. A sun-loving plant, it has during this and the last few summers flowered profusely, and has proved itself a really handsome shrub for sunny positions. A few of its racemes are still bearing flowers, but it was about a month ago when it was in full beauty. It gets its specific name from being found in Siberia near the banks of the Volga. It is a leguminous shrub, 2 feet to 3 feet high with pinnate leaves each 3 inches to 4 inches long. The short-stalked leaflets (of which there are usually seven pairs and the odd terminal one) are orbicular, about a quarter of an inch in diameter, and covered on both sides with a greyish tomentum. The number and small size of these leaflets give the shrub a very distinct and pleasing character, and they serve admirably also as a contrast to the racemes of yellow flowers. These racemes are axillary, 4 inches to 6 inches long, and carry six to ten flowers of a papilionaceous character; they are deep yellow, and on the standard petals are stained with a still darker, reddish tinge. In fine seasons like the present, seed is formed plentifully and the pods, each 1½ inches long, together with the calyxes and flower-stalks, are covered with short, dark brown glandular bristles. It grows naturally in dry arid regions, and, like many shrubs

that character, I find it difficult to raise from seed. The seed germinates freely enough, but the young plants are very apt to damp off the first winter. This is indeed one of the few instances among shrubs where grafting is advantageous. Worked on standards of *Caragana arborescens* 3 feet or 4 feet high, it thrives admirably, and in being thus elevated it assumes naturally a sturdier and graceful habit. The common *Lahurman* has also been recommended as a stock.—B.

**Itea virginica.** This North American shrub well merits the recent note in THE GARDEN, though it has somehow acquired the reputation of being a poor plant, it is when in good condition really a pretty shrub, and one whose late season blooming is in its favour. It forms a freely branched, compact bush that reaches a height of a yard or so, but it will flower freely when not more than a couple of feet high. The flowers are small, but borne in closely packed cylindrical racemes which from 4 inches to 6 inches long. They are white and bear a certain amount of resemblance to those of the North American *Clethras*, which are still later in blooming than this *Itea*. Botanically, however, they are quite distinct, the *Itea* being a near ally of the *Escallonias*, while the *Clethras* belong to the *Ericaceae*. The *Itea* succeeds best under the conditions most favourable to what are commonly known as American plants; that is, a fairly moist spot, a soil containing a admixture of peat or well-decayed leaf mould, and a position fully exposed to the sun's rays, though if shaded it does not flower so profusely as a sunny spot. In the autumn the leaves die off brightly coloured. This *Itea* in a native state extends from Pennsylvania to Carolina, and was introduced into this country in 1744.—T.

**Indigofera Gerardiana.**—There is a mass of this shrub about 14 feet across in the arboretum at Kew, which is one of the most attractive of the woody things in flower at this date. When grown in the open it mostly dies back to the ground each winter, sending up the following summer a luxuriant thicket of slender, graceful stems 2 feet to 3 feet high, clothed plentifully with rich dark green pinnate leaves, from the axils of almost every one of which there is produced a raceme of deep-purple flowers. These racemes are each 4 inches to 6 inches long, the larger ones bearing several dozen closely-set flowers. The racemes at the base of the shoot are over before those near the top are expanded, and the flowering season lasts, in consequence, from July almost up to the time of the first frosts if the weather remains open and sunny. For this reason, as well as for the exceeding grace of its foliage, this shrub deserves more extended notice. Its only defect is that it is late starting in spring. When grown on a wall its stems survive the winter, and it forms a stout woody stem several feet high. It is a native of the Himalayan region and can be propagated by means of cuttings put in this month, and also by seeds when the summers are sufficiently sunny for them to ripen.

**Eucryphia pinnatifolia.**—This is, perhaps, the most beautiful of all hardy shrubs in flower now; certainly none is more striking. There is a group of plants near the Cactus house at Kew, forming a mass about 5 feet through and 4 feet high, very finely in flower. They have been in their present position—which is not a very sheltered one—for several years, and the species has therefore proved itself quite hardy in the neighbourhood of London. Whatever disasters the winter of 1894-95 may have brought to many exotic shrubs, it left the hall-mark of hardiness on those that survived, and this shrub was one. Each flower is 3 inches to 4 inches across and pure white; there are four wedge-shaped petals, and in the centre is a large tuft of yellow stamens. It suggests at once a very noble Christmas Rose (with petal short) and a *Hypericum*. The leaves are alternate and the leaflets number three or five, and are of a dark lustrous green. For the south of England, at any rate, this *Eucryphia* is a most valuable addition to our July and August flowering shrubs. Bentham and Hooker place the

*Eucryphia* in the great Rose family, but other authorities have placed them with the *Hypericums* or the *Saxifragas*.

**Hibiscus syriacus.**—The different varieties of *Hibiscus syriacus* have been long regarded as desirable flowering shrubs, from the fact that the blossoms are borne during the latter half of the summer when hardy shrubs in bloom are but few in number. Such being the case, it is somewhat singular that the first time any variety of this *Hibiscus* received notice from the Royal Horticultural Society was as recently as July 27, when two varieties were given awards of merit. Both of them are single-flowered forms, one (*Painted Lady*) being very little known, while the other, *eclestis*, is of French origin, and has been long grown in this country. There are numerous other varieties both single and double, and a few of the most distinct when brought together will form a very interesting group, and one, too, whose most effective stage is at the end of July and in August. This *Hibiscus* is perfectly hardy, and succeeds best in a rather deep soil of a loamy nature. It is very essential that the soil is not parched up during the summer, as the plants quickly suffer from drought, the leaves turning yellow and dropping off, while the flowers do not expand in a satisfactory manner. Among other desirable qualities possessed by this *Hibiscus* is the fact that it will succeed in the neighbourhood of towns better than many other shrubs.

## CHRYSANTHEMUMS.

### CHRYSANTHEMUM NOTES.

TAKING the flower-buds is an item of culture that will be almost general now; at least, with those who cultivate the plant on what is called the "big bloom" system. To produce flowers of large size, considerable time must be given for the buds to develop. If, for instance, we allowed the plants to perfect their last natural flower-buds—which are known as terminals—that usually appear in September, the time between that state and blossoming would be too short in the case of almost every variety of note. Growers, therefore, are now (early August) on the watch for a flower-bud at the point of each shoot, which may be almost hidden by a cluster of growths around it. Unless in the case of a few varieties this flower-bud should be retained on the plant and the little growths pinched away. This bud is known as the crown bud; it comes at varying times until about the second week of September. Viviani and Morel, Charles Davis, Mme. Carnot and Australian Gold may be named as producing fine deep blooms from late-formed flower-buds, but it is not wise to defer selecting buds of other Japanese kinds as they appear from now. Crown buds, again, are chosen for the growth of large deep blooms of the incurving class of *Chrysanthemums*, and later or terminal buds in the case of the different types of *Anemone* (single and pompon). What little manipulation of growth is required should be done in early spring. For example, that splendid Japanese kind, *Mrs. H. Weeks*, may not be expected to develop fine blossoms from late buds. These being very late to show themselves naturally, one cannot obtain them, even in August, without having topped the growth of the plant. Those handsome show flowers, *Mrs. F. Jameson*, *Mrs. John Shrimpton*, *Dorothy Seward*, *John Neville*, *W. G. Newitt* and *Mrs. W. H. Lees*, are others which will be disappointing if flower-buds cannot be had soon. In every variety that I know the flowers resulting from late buds will give blooms comparatively finer in colour. For other purposes than large blooms, therefore, the grower may wait for this formation in the natural manner.

### FEEDING.

That *Chrysanthemum* plants are generally over-fed with rich manures either in solid or liquid form I have not the slightest doubt. In looking through collections I see this every year. Such over-fed plants look taking to the eye, with their large, deep green leaves and gigantic stems, but rarely do such specimens produce satisfactory blooms. Badly-formed ones or those of a broad, flat nature are usually the result. The wood of *Chrysanthemums* must be firm, short jointed, and well ripened to give flowers of a high standard. At the same time it is hardly possible to keep the plants in a healthy growing state throughout the season without more or less feeding. The plants get yellow and contracted in growth when the large pots become full of roots if assistance be not given; and especially during the trying hot weather lately experienced. I would feed the plants, not for the purpose of obtaining big wood, but only to retain a healthy look in the leaves. Soot-water is excellent for this. Some sorts again really resent strong manures—*W. Seward*, *Mme. Carnot*—in fact all the whites—*Col. Smith*, *Hairy Wonder*, and the incurved varieties generally. When light, sandy soils are employed the need for stimulants is comparatively great, as such become impoverished early. Liquid manure from the farm-yard is not easily beaten and Peruvian guano has the constituents required by *Chrysanthemums*; whilst the approved fertilisers, of which there are so many, may be used with safety, always remembering weak doses and often are the proper rule to follow. Some assistance may also be rendered by the aid of a top-dressing of soil; an inch or so as a surface covering will be quick in producing top roots. Do not, however, make the soil over-rich with concentrated manures, or it may have the opposite effect.

### INSECTS

are not over numerous with me, the plants being in an open position, but earwigs are generally plentiful. These should be trapped; they do much damage among the soft points of the shoots, and often spoil many blooms. Pieces of the stems of the Broad Bean placed among the leaves are a good harbour for this pest. Prompt action in the matter of tying the shoots securely saves one the disappointment of many losses, the results of months of labour being easily spoiled by high winds. It is curious how several of the more popular varieties become addicted to some disease or decay which appears to affect their constitution in an unaccountable manner. Thus we find the leaves of that fine sort *E. Molyneux*, which are normally large, small, curled, and thin in substance. *Viviani Morel* and *Charles Davis* suffer in a similar way. Nothing less than a change of stock will alter this, and even then I have known them again take the disease in a year or two. I daresay there is something in the idea that high cultivation weakens the constitution of plants, and that in time they die out. The family of incurved sorts known as the *Queen* is another case. Many good cultivators have expressed the opinion that they, too, are past, and cannot be grown so fine as they once were. *Mme. Carnot* has a tendency to lose the leaves, even when the best means have been taken to prevent it. I notice also that a variety said to be a seedling from it, *Baronne Ad. de Rothschild*, has a similar, or rather an aggravated form of this tendency. At first spots are seen all over the leaves; these increase in size until finally decay sets in.

H. S.

**Chrysanthemums at Sydney, N.S.W.**—At the meeting of the floral committee of the New

South Wales Horticultural Society, the following colonial seedlings, raised by Mr. G. Kerslake, were awarded first-class certificates during the past season: F. McQuade.—Japanese; tips of petals slightly incurving; colour bright terracotta, amber reverse. Mr. J. H. Horton.—Japanese reflexed; colour bronzy yellow, centre paler. Miss Mary Underhay.—Japanese; petals broad and incurved; colour primrose-yellow.—C. H. P.

## FLOWER GARDEN.

### THE EDELWEISS.

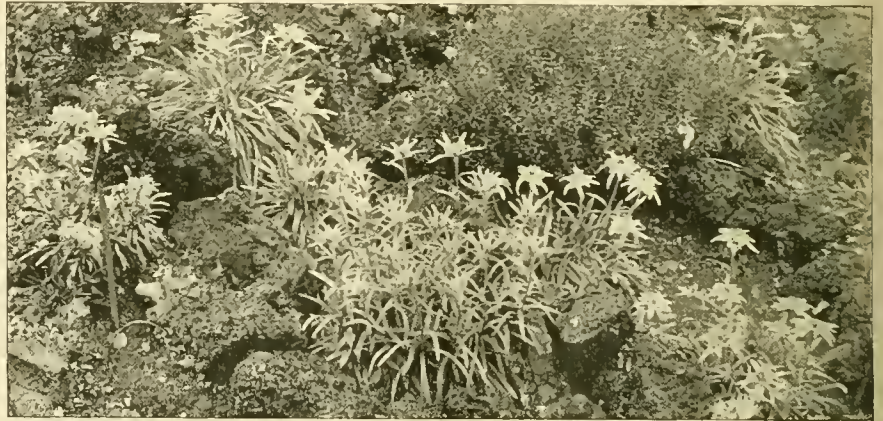
THE Edelweiss (*Leontopodium alpinum*) is perhaps one of the most popular plants of the alpine flora, and the one plant of thousands that the average mountain tourist is most anxious to discover. Interesting the plant is undoubtedly, though beyond this it possesses but few attractions from a decorative point of view. Of course its correct home is the rock garden, where it should be planted in not too rich soil, yet quite firm. The plant is seen always to good advantage if rather freely grouped in colonies in the rock garden. The plant may be grown with complete success when a few strong seedlings are firmly planted in a narrow chink of rock, so placed that a deep fissure of gritty or sandy loam may be assured for the roots to ramble in. Plants in pots may be grown and flowered when the collar is tightly wedged between some pieces of stone or old mortar. At this season of the year I have frequently received parcels of the plant by post merely wrapped in a bit of Sphagnum Moss and some oiled paper, and in this way they travel well. But whether these collected plants will continue to succeed under cultivation in our lowland gardens depends as much on the way they have been lifted as upon any subsequent treatment on arrival. Assuming such plants do come to hand, and possessing a fair amount of fibrous roots, there is no better way of starting such things than by planting them not too deeply in coconut fibre and sand. Many plants that frequently rot, and that rapidly, when placed in soil will start new roots quite quickly when planted in this simple way: Give one good watering when planted, place in a rather shaded place and not a stuffy, ill-ventilated frame, and leave them alone for a week at least without further moisture. In this way scores of rare alpine plants have been treated after a long journey with a good deal of success. On the other hand, those who have no opportunity of obtaining plants direct from their mountain home will find seeds by far the best method of obtaining a stock. Indeed, seeds must be looked to for perpetuating the stock also, for the plant is not always a success when divided. On the other hand, it may be grown from seeds with perfect ease, and though I have grown the plant with success, I am bound to say I have never been able to obtain such results as I saw a few years ago in the gardens of Pusey House, Berkshire. Here the Edelweiss was treated as a biennial, large beds being edged around with it. The plants grew with considerable vigour, making tufts of leaves over a foot high and flowering abundantly. In this way a succession of plants, to flower each year, was maintained, seeds being harvested in great quantity. The plant produces tufts of hoary or woolly leaves from which issues the flower-stem, usually not more than 4 inches or 6 inches high. The true flowers are small and inconspicuous, yellow in colour, and set as it were in a star-like whorl of woolly, oblong leaves,

rendered white or nearly so by the density of the down-like tomentum that covers them. To this peculiar and interesting character the plant owes much of its popularity.—E. J.

Mr. Jas. Epps, Junr., Upper Norwood, who kindly sent the photo from which the illustration was prepared, writes as follows:—

I enclose a photo I have taken of a fine mass of Edelweiss that I have at the present time in flower in my garden. I have made the bed on a steep slope facing the S.W. and quite in the open. The plants have grown freely. Last year the plants also flowered freely, seed ripened, and this year numbers of young plants have become established. Some of the plants have ten to fifteen blooms.

**Layering border Carnations.**—Many gardeners layer their entire stock of border Carnations annually, and when well rooted transplant the whole batch separately, but while agreeing that the finest individual blooms are secured in this way, I maintain that the most attractive masses of bloom are secured by layering one-year-old plants and allowing the layers to remain where they are. Of course only a portion of the stock need be treated in this way, and the best effect is produced when these are together in beds or borders. I have had a grand show of the Burn Pink on plants treated in this way, also Celia and Lord Rendlesham. For cutting and



The Edelweiss in a garden at Norwood. From a photograph sent by Mr. Jas. Epps, Junr., Norfolk House, Beulah Hill, Upper Norwood.

for use in bouquets, I do not think there is a more useful variety than the Burn. It also has a grand constitution.—J. C.

**White Cactus Dahlias.**—There are several so-called white kinds, but a really good one has yet to be introduced. Mrs. Peart has blooms of nice shape when caught true, but it is very uncertain. I find the better flowers come through planting the old tubers instead of young spring-struck plants. Mrs. F. Fell is a kind that blooms very freely, but it is scarcely pure white or Cactus-shaped. Salisbury White and Harry Freeman, although most useful for a supply of cutflowers, are not good types of the shape desired. Keynes's White is the nearest to perfection; this, however, will not be grown generally until next year; meantime it may be noted as a sort likely to be greatly esteemed.—S.

**Good outdoor Fuchsias.**—The little Dun-robin Bedder is a capital dot plant for small beds, as effective here as the stronger varieties are for beds on a larger scale. Some two dozen plants that were saved over from last year and planted on a long narrow border on a carpet of Manglesi Geranium have developed into fine bushy stuff, and are flowering very freely. I have not as yet left it out through the winter, but the character of the plant would seem to indicate that it is hardy, or, at any rate, that it would be safe

with a heavy mulch of half-decayed leaves. General Roberts is a capital outdoor sort, a form a very attractive bed with alternate plant of white Marguerites or Hydrangea paniculata which, by the way, is flowering early this year and throwing very fine heads, or it may be planted freely on a white carpet, such as Centaurea Veronica incana. Duke of Edinburgh and the old Rose of Castile are in their respective colour as good as General Roberts, and another splendid variety not so well known is Annette. This form bushes and pyramids almost perfect in shape and flowers so freely that on well-bloomed specimens very little is seen of the foliage. It is season for Fuchsias, and they are certainly among the most attractive things in the flower garden. E. B. C.

**Statice latifolia.**—It is worthy of note that seedling plants of the great Sea Lavender are very considerably in their time of flowering, a fact that their value for cutting is thereby enhanced. With the view to strengthening the stock of this very useful plant, I sowed a packet of seed in autumn of 1895. The young plants are throwing up some huge panicles this summer, and it is interesting to watch the respective development. On August 2, for instance, one had its delicate lavender flowers well expanded, the type being very good and individual blooms of extra size; another had its buds well advanced, and yet another showed a perfectly green panicle with

sign of bud expansion. Bearing in mind the deep-rooting tendencies of Statice, it is advisable when growing from seed to transfer the seedling at an early stage to the spot they are destined permanently to occupy, and either to bastard trench or very deeply dig the site. They show to advantage in a bed of considerable size, and by way of contrast some clumps of a highly-coloured Pentstemon or Montbretia can be planted with them. If the object is quite as much to secure an effective display in the bed as to obtain a supply for cutting, individual panicles may be lightly staked to keep them clear of the ground.—E. B. C.

**Large plants of Western American Erythroniums.**—As stated in my article on Erythroniums, I do not believe that there is any difference in the average size of our Erythronium outside of *E. purpurascens*. Taking each species at its best development, I am fast learning the measures of size of any of our Liliaceae are of little value. The size depends on conditions, and the supposed dwarf species often takes on an immense development when just the right season and soil conditions occur. A striking instance of this came to my knowledge this season. Sereno Watson in his revision described two varieties of Erythronium grandiflorum. *E. grandiflorum* var. *parviflorum* was, as its name indicates, rather

lwarf in scape and small in flower. Among other regions, it occurred in the Blue Mountains of Eastern Oregon. One of my collectors found and collected it in these same Blue Mountains this season, and there were many stalks 2 feet high, with one 3 feet in height; and while four or five flowers were common, a maximum of ten was attained. The bulbs were immense. These fine dimensions do not indicate to my mind a larger species, or even a larger strain, but simply congenial surroundings. I recently saw stalks of *Erythronium revolutum* 2 feet high.—CARL PURDY, Ukiah, California, U.S.A.

**Feather Grass and Poppies.**—The informal border of hardy flowers gives us at times many unrehearsed effects of the most pleasing kind. One of these this year has been a combination of the Feather Grass (*Stipa pinnata*) and some scarlet Poppies. The latter are self-sown seedlings originally from the Shirley strain of varieties of *P. Rheas*, and are of a brilliant crimson. Nothing could be more delightful than the appearance of these glossy fluttering flowers, among which stood the ilcey plumes of the Feather Grass. The glowing colour of the Poppies enhanced the delicate beauty of the Grass, which in its turn opened the brilliance of the "Corn Rose," as the Poppy has been called.—S. ARNOTT.

**Erythroniums.**—In my article on *Erythroniums* published in THE GARDEN June 5, p. 408, two varieties of *Erythronium revolutum* were left without a name. One was the fine cream-coloured form which Sereno Watson in his revision called the type of *E. revolutum*. By Mr. Baker's decision the purple-flowered form is the type of *E. revolutum*, and Watson's type is left nameless. I know of no more appropriate name than *E. revolutum* var. *Watsoni*. The early-flowering form between *E. giganteum* and *E. revolutum* I will call *E. revolutum* var. *præcox*. The plate in *Botanical Magazine*, t. 5714, is the white form of *E. revolutum* var. *Watsoni*, and differs in no other respect except that var. *Watsoni* is creamy and the other white. The white one is my *E. revolutum* var. *billurum* in THE GARDEN of June 5, 1897.—CARL PURDY.

**Dahlias and earwigs.**—Probably many gardeners, both amateur and professional, are finding earwigs troublesome among the Dahlias, and the following hints, both as to staking Dahlias and trapping earwigs, may be of use in the future. I grow about 350 Dahlias, and, with a view to lessening expenses, I have this year staked with about 5-ft. bamboo canes (these cost about 1s. 6d. per dozen, as compared with 2s. 6d. per dozen for althia stakes). But the bamboos also make capital earwig traps. The first 5 inches or 6 inches of the cane will be probably hollow, and into this the insects creep after their night's feeding. I therefore cut into the cane just above the first joint and make a hole large enough for an earwig to get out. Every morning I examine these canes, and by the light shining in at the hole that has been cut I can see every insect inside, and by blowing strongly down the hollow, the earwigs will run into, or be blown into, a bowl or bucket held there for the purpose, and may then be easily killed. In this way I have kept the earwigs from destroying the blooms and also kept down the cost of stakes.—R. W. FOOT.

**Single Hollyhocks.**—Few persons will dispute the opinion expressed on page 99 that single hollyhocks are more ornamental than the double ones, for they possess a grace and beauty of their own which are totally wanting in the more lumpy double blossoms. Single flowers, too, seem to be gaining in popularity, for they crop up in many gardens, and in most instances are in good condition. The writer of the above-mentioned article concludes with the hope that someone will take the single Hollyhocks in hand and improve them largely, while he says "selection may do much, and intercrossing perhaps more." Where any system of crossing is followed it should be borne in mind that we have a most beautiful Hollyhock in *Althæa ficifolia*, of which a coloured plate appeared in THE GARDEN

January 12, 1895. The drawing was made from a plant that flowered in the herbaceous ground at Kew, where a short time since this species was remarkably showy. *A. ficifolia* forms a sturdy growing plant that in vigorous examples will reach a height of nearly 6 feet, the large leaves being five to seven-lobed, while the blossoms, which are each about 4 inches in diameter, are of a beautiful light clear yellow, in all respects totally different from those of the ordinary garden varieties. If single Hollyhocks are taken in hand by our hybridists, this charming species will doubtless play a part in the production of new forms.—H. P.

**Phlox Coquelicot.**—This Phlox, which has attracted a good deal of attention of late, owing to the brilliant colouring of its blossoms, seems to be but little known, while, judging by the catalogues, very few, if any, of our nurserymen have it in stock. It is therefore worthy of note that this variety is one of the many triumphs of that eminent hybridist, M. Lemoine, of Nancy, by whom it was sent out in 1896, and in whose catalogue it occurs among the varieties of 1896. On July 27 the members of the floral committee of the Royal Horticultural Society met at Chiswick to take under consideration the Pentstemons, Cannas and Phloxes growing there. The variety Coquelicot on this occasion received an award of merit, an honour bestowed on some other varieties from the same raiser, viz., *Evening*, rosy salmon, with a violet eye; *Tourbillon*, very large flowers of a rich salmon-carmine tint; and *Beranger*, soft salmon-pink, rayed with white, and a violet centre. There are now so many bright and effective varieties of this class of Phlox, that there is no excuse for planting the dull lilacs and washed-out purples that are so often seen.—H. P.

— We see that the Phlox Coquelicot has been much noticed and appreciated in England by your having twice published paragraphs about it in your paper. Its origin is as follows: We obtained this plant from seed and put it into commerce in the autumn of 1895 as a novelty. It appears in our last catalogue under the heading of "Varieties of 1896," p. 76. The plant the flowering of which has been noticed at Kew came directly from us.—V. LEMOINE ET FILS, Nancy.

CARNATIONS.

THE article in your issue of 7th inst. is interesting from an American point of view, but it is not very practical for this country, as the type of flower that is admired in America is totally different from that which we consider beautiful here. Take any of the best of the American Carnations. They have all papery petals with the roughest possible edges; they are most of them, it is true, nicely scented, which is a great thing in their favour. If an amateur wishes to please his own fancy only, he may, of course, indulge in American or other saw-edged varieties to his heart's content, but should he wish, as most amateurs, and professionals also for that matter, do, to be successful in the exhibition tent, it is imperative that he discard anything of this sort. He must see that his flowers are (1) perfect in form; (2) that the petals lie flat all round, with perfectly smooth edges; (3) that the calyx is unsplit; (4) that the colours are bright; and (5) that the stems are strong and able to support the blooms well above the plants, bottles, or glasses, as the case may be, without support.

Unless these few suggestions are carefully complied with the exhibitor may never expect to catch the judge's eye. If the grower can afford time and space to grow seedlings, by all means let him do so; but he must consider himself indeed fortunate if from the best seedlings procurable he can select five per cent. that are an improvement on existing varieties. Carnations have been so improved of late years, thanks to the efforts of the president of the National Carnation and Picotee Society, that each year the type gets higher and the restrictions more difficult to cope with. Amateurs may, however, take this as a

golden rule, that it is of no earthly use their placing any American or rough-edged flowers in their show stands in any high-class competition, for the judges will simply ignore them.

The authority I have quoted above evidently favours the undressed flowers, as he gives valuable prizes each year for flowers grown exclusively in the open air and that have not been touched by tweezers. These, therefore, have to be the strongest and best border varieties to stand any chance in a large public competition. I do not care for the large, split, tweezered and collared flowers, but in this I am, I believe, in the minority. It is, as in many other things, a matter of taste.

These remarks apply quite as much to the plants that are now being grown so extensively for winter blooming. We have as yet no winter exhibition of Carnations, but each season the varieties are improving and the number of winter-bloomers is increasing, so that by-and-by we may perhaps have a National show and a Midland show in January as well as in July.

H. W. WEGELIN.  
*St. Marychurch, Torquay.*

**Cactus Dahlia Cycle.**—The demand for this new type of Dahlia is causing the introduction of a large number of new kinds, and it will not be long before some discrimination is required, as among Roses, Chrysanthemums, and other popular flowers. The object of this note, however, is a great improvement in its colour. This is bright rich ruby-red. The form, too, most liked, is seen in this variety, which is striking and handsome. Its habit of growth and freedom of flowering place it in the list of the choicest.—S.

**Carnation Pride of the Garden.**—This is a hardy and free-flowering variety, and one that should be grown in all gardens where plenty of bloom for cutting is needed. The colour is a rich rose, which shows up well from a distance. This variety makes plenty of grass, so that a good stock of young plants can soon be raised. One-year-old plants layered and allowed to remain undisturbed the second year made a brave show, producing hundreds of their elegant rosy flowers. Pride of the Garden should be grown where ground is limited and only a few varieties can be accommodated.—J. C.

**Species of Hemerocallis.**—Having recently observed a question on this subject (p. 112), I consulted "Index Kewensis" and the "Kew Hand-list of Herbaceous Plants"—the two most recent and most trustworthy authorities—neither of which recognises the thousands of pseudo-botanical names given on no authority to plants by nurserymen and gardeners. I find that each of these authorities gives five species of *Hemerocallis*. "Index Kewensis" recognises *H. Dumortieri*, *H. flava*, *H. fulva*, *H. Middendorfi*, and *H. minor*. The "Hand-list" omits *H. Middendorfi* and gives one additional, *H. Thunbergi*, so that these two authorities together recognise six species in all.—C. WOLLEY-DOD, *Edg. Hall, Malpas*.

P.S.—I have known *H. Dumortieri* called *H. aurantiaca* in nurseries.

SHORT NOTES.—FLOWER.

**Michauxia campanuloides.**—One does not often see this quaint-looking and showy biennial. Perhaps it is that being a biennial it does not find much favour. These biennials are certainly disappointing plants. You think you have them established and you find to your disgust that you must begin sowing them afresh. There are some of them which seed very freely and reproduce themselves.—D.

**Helesium grandiflorum vel striatum.**—On going through the interesting garden of Mr. C. J. Grahame, of Wrydeclands, Leatherhead, I was struck with a plant, although its flowers were passing off, which he told me he had received under this name—*Helenium grandiflorum*. I cannot quite make it out, either from catalogues I have or in Nicholson's "Gardener's Dictionary."—H. H. D.

**Crium Powelli.**—This, which was raised by Mr. Powell, of Southborough, near Tunbridge Wells,

was given to me some three or four years ago. It has grown vigorously with me, and has withstood our severe winters without any protection, though I think I should be inclined to give it a little covering next winter of either Fern, Pine needles or cocoa-nut fibre. The height is from 2 feet to 3 feet.—D. D.

**Dryas octopetala.**—This very pretty native plant, with its delicately cut foliage and pure white blooms with yellow stamens, may be induced to flower all the summer if the seed-pods are picked off. My clump of it, which was sent me by a friend from Galway, flowered early in the spring, and is now (August) covered with its pretty blooms. It is certainly worth the little trouble of picking off the seed-vessels to get it to flower so continuously. It will vie with many of our alpine plants both in its foliage and flower, and is certainly more easy of cultivation than many of them.—D. O.

## ROSE GARDEN.

### HYBRID PERPETUAL ROSES.

This is the largest section of our Roses, and to many the most desirable, their colours being the brightest, and in most cases they are delightfully scented. The Hybrid Perpetual Roses as we now have them are the result of much crossing, hybridising, sporting, and other developments and methods of raising Roses, and originated in the first instance from the crossing of the China with Bourbon Roses. The general name "Perpetual" to all of this class is a misnomer, as many are not at all perpetual; but some varieties, more especially some of our oldest Roses, keep on blooming up to the month of November. Amongst the old H.P. kinds one may instance especially La France and Charles Lefebvre, and amongst newer varieties, Viscountess Folkestone and Victor Hugo as true perpetuals; whereas Mrs. John Laing, Margaret Dickson, Gabriel Luizet, General Jacqueminot, and many other H.P.'s do not usually bloom after the month of August—at all events, it is quite the exception when they do so. There is one advantage which H.P. Roses possess over their more aristocratic relatives the Teas, and that is they appear to have no marked preference for locality or position. Give them a fair start by good planting, and they will do equally well on heavy or light land, in warm or cold positions, on the side of a hill or on a dead level. Naturally they will bloom earlier when they have every advantage, and they will be heavier in petal off heavy land, but, taking them all round, H.P.'s will do well in almost all localities and situations where the air is pure and where they have been properly planted.

There is still great divergence of opinion as to what is the best stock on which to grow Hybrid Perpetual Roses, although it is usually allowed that Teas grow best on the Brier. The Brier, however, is the best of all the stocks. Some consider that maidens on Briers develop their first blooms too late in the season, and therefore those rosarians who use this stock are handicapped when they grow maidens extensively for exhibition.

Which are the best Hybrid Perpetual Roses to grow? That is a question which might lead to controversy, as our Rose lists alter annually. Each year a few (very few) good, apparently new, Hybrid Perpetuals are brought out. Some last in favour a year or two, some even longer, but the great majority are relegated to the dust-heap or given to friends who grow Roses in a casual sort of way. Few Hybrid Perpetual Roses have been brought out of recent years which can be said to equal and none to excel our oldest favourites. No doubt many good ones have been produced, notably Mrs. John Laing, Captain Hayward, Marquis

of Downshire, Marquis of Londonderry, Gustave Piganeau, Jeannie Dickson, Sir Rowland Hill, Viscountess Folkestone (best of all), Her Majesty, Margaret Dickson, most of which will permanently hold their positions, but are they better or more reliable, or will they supplant such varieties as A. K. Williams, Baroness Rothschild, Charles Lefebvre, La France, Marie Baumann, Comte de Raimbaud, Mme. Gabriel Luizet, Alfred Colomb, Dupuy Jamain, and General Jacqueminot? Certainly not. But there is a marked peculiarity in regard to the new Roses brought out; we seldom see a really first-class new dark and distinct red Rose. There are too many new Hybrid Perpetuals of various shades of light and dark pink, and too much alike. We do not want Roses of these uncertain lighter colours, but of decided shades

without exception the dark red Hybrid Perpetual Roses are sweet-scented, the want thereof being principally confined to some of the pink varieties, as Merveille de Lyon, Susanne Rodocanachi (here figured), and Duke of Edinburgh.

**Rose Mme. Edouard Helfenbein (Tea).**—This season has again shown the value of the lovely Tea Roses. At the commencement of August, when most of the Hybrid Perpetuals are devoid of all blossom, these grand Roses are beautifying our gardens and filling the air with their fragrance. The above variety is a worthy addition to the very vigorous non-climbing Teas, of which Marie Van Houtte and Mme. Lambert are good examples. The colour of the variety under notice is of the shade generally known as old gold; the centre of the flower is tinged with



Rose (H.P.) *Susanne Marie Rodocanachi*. From a photograph by Messrs. Byrne and Co., Richmond, Surrey.

of red, as the brilliant scarlet of Duke of Teck or Cheshunt Scarlet, or such whites as Margaret Dickson. We already have too many pink Hybrid Perpetuals similar in shade and shape, and between which at times even experts can hardly discriminate.

Another quality which of late years has not been considered a *sine qua non* in producing new Hybrid Perpetual Roses is that of scent. Surely of all qualities the Rose should not be scentless? It is the crowning point in a good Rose, and the greatest defect of two such good Hybrid Perpetuals as Baroness Rothschild and Her Majesty. Who would prefer either of these even in their greatest glory to a really good La France or a Mme. Gabriel Luizet, sweetest of all Hybrid Perpetuals? Almost

salmon shade, with fawn-coloured outer petals. Perhaps the flower is too rough or irregular in form for exhibition, but for the garden it is super and I can highly recommend it.—E.

**Rose Beaute Inconstante.**—Perhaps the variety, on account of its wonderful colour, is the most attractive of all the semi-double Teas. It is of an indescribable shade, and to say it is coppery red is not doing full justice to the Rose. A large amount of orange pervades the flower. As its name implies, it is variable; sometimes the blossoms on one plant are partly coppery red others of a pink and fawn colour. Possibly to propagate constantly from the shoots bearing highly-coloured flowers would in time fix the latter and most pleasing colour. Although it has this variable character, everyone should possess this variety. The perfume is delicious. It is,

stander grower, excellent alike for bush or standard. Under pot culture most of the blossoms are of the high-coloured coppery-red shade. It was raised by M. Pernet-Ducher, who has given Gustave Regis, Caroline Testout, and other rising novelties.—E.

**Roses losing colour.**—I see many letters in THE GARDEN asking the reason of certain Roses not appearing in their proper colour. I enclose an example of Crimson Rambler in which the twig was broken before flowering, and the flowers at the end have come quite pale, whereas just behind the break an off-shoot has come on which the flowers are of the natural colour. Of W. A. Richardson I have four plants on a brick wall. Last season I had a few pale-coloured flowers; this year not more than 1 per cent.—C. W. COWAN, *Weyfield, Penicuik, N. B.*

**Rose Souv. de Catherine Guillot (Tea).**—I would be difficult to name a more beautifully tinted Rose than the above. Its colour is scarlet orange, suffused with salmon, the edges of the petty buds heavily lined with earmine; a most lovely combination. It has a fairly large petal, but the flower is not full enough for exhibition; however, as a garden Rose it is destined to take a prominent place. This variety has a very attractive feature in its reddish wood and foliage, which certainly tend to enhance the vividness of its lovely-coloured flowers.—PHILOMEL.

**Rose Climbing Captain Christy.**—Yellow, red, and white climbing Roses we have in abundance, but pale pink varieties are not very numerous. In the above variety we have an ideal climber. The dwarf form is in almost every garden in the land, and the climbing sport of this grand Rose would also find a place. There is very little difference, if any, in the flowers of the dwarf and the climbing forms. The latter will make shoots fully 5 feet in length each season, and when well established it flowers abundantly. It also makes a splendid variety to grow as a standard, the fine long shoots gracefully drooping with the blossoms which they produce.

**Rose Eclair (H.P.).**—The very expressive name given to this Rose by its raiser is certainly well merited. Its brilliant, flashing, velvety crimson blossoms are most effective. Probably there is no Rose to equal it for doubleness, and it makes a grand front-row exhibition flower. It is a globular form, not very large for a Hybrid Perpetual, but the petals slightly reflex at the edges, which gives the bloom a very distinct character. Its flowers are produced rather sparsely, but it is a good grower, and if budded on the seedling or cutting Brier, its lovely colour is much more glowing. It is also a very fragrant variety.

**Roses in Midlothian.**—This has been the best season for Roses experienced for several years, but the following have proved as useless as before. Buds come in plenty, but on opening, the flowers are distorted so as to be quite worthless. Suzanne Marie Rodocanachi and Mlle. Eugénie Verdier among Hybrid Perpetuals, and Marquise de Salisbury among Hybrid Teas are the worst offenders. Before discarding the groups of these sorts—eight or ten of each, dwarfs—I should be glad of any hints as to whether anything can be done to make them flourish as well as Dr. Grill, the Hon. Edith Gifford, Madame Odéane Guinoisseau, Rubens, Marquise de Yvrens, and many others growing alongside of them.—J. M.

**Rose Helen Keller (H.P.).**—For general usefulness this Rose will rank nearly equal with Mrs. John Laing. For the last week or two it has been one of the showiest among the H.P.'s. It produces fine strong shoots, which are crowned with bunches of four and five blossoms, and a distinct feature of the variety is that these blossoms expand almost simultaneously, a fact not to be lost sight of. Helen Keller reminds one, in the exquisite high-centred, perfectly formed flower, of that almost forgotten variety, Emilie Husbarg. Its flowers have just the same silvery tinge to the petals, but the ground colour is a

much deeper pink than in that good old kind. Another useful attribute of Helen Keller is its sweet perfume. This quality is doubly valuable in such a lovely Rose.

**Fragrance of Roses.**—I enclose a few remarks on the fragrance of Roses. I have long collected all the old Roses, not only for their beauty, but for this very virtue, their great sweetness of perfume. Of course we have the pleasure of their presence for a much shorter time, but no garden, however small, should be without them. Many of the old ones are lost to us, but I have found treasures in old villas in Italy, often in those hid away in the mountains, many also are preserved in old Scotch houses, but there is one I have searched for in vain—the single Moss—though I still hope to find it, and that also would be a sweet parent. "Ridge-wood's" comment on "D. T. F.'s" note (p. 80) is true, but the difficulty of judging of the comparative fragrance of Roses is not insurmountable, and we must allow that much of the perfume of the old Roses can no longer be found in the beautiful hybrids of the present day. If we fill a glass with the sweetest of these and another with the Rosa biflora officinalis (Redoute's Rose des Parfumeurs), all doubt would vanish. Or who would make pot pourri with the sweetest of our new beautiful friends? The scent of the old ones remains long after their beauty has faded. This Rose (biflora officinalis), the one used in all the old pharmacies in Italy, is called in Tuscany the Rosa di Maggio, and is also the one grown on the Shipka Pass in the Balkans for attar of roses. I think we should all sympathise with "D. T. F.," and wish with him that the Roses of the future should possess the lovely gift of sweetness. How would it do to use Rosa biflora officinalis for this purpose?—C. L. S.

THE BROUGHTY FERRY ROSES.

This year the Roses at Broughty Ferry are from three weeks to a month later than last year; hence the simple explanation of their absence from the National Society at the Crystal Palace and Norwich and other great shows. The plants, however, are in superb health and vigour, and the time lost through the cold spring will be added to the other end of the blooming season, probably extending the Rose harvest well into the winter. Though the Rose season is late, in these nurseries the budding season is early, and was well-nigh finished at the time of my visit. The Roses are mostly on the Brier or Dog Rose, and though the Perpetuals are not so large as on the Manetti at Colechester, the whole of the Roses are a very even lot of the most promising character. A unique system prevails in these nurseries of obtaining a fine supply of maiden blooms throughout from very early breaks from the dormant buds. Almost immediately on the heels of budding, the Briers, which are specially robust, are pegged down level with the ground through the use of bamboo canes pegged down strongly over them. This system facilitates the taking of the buds and forces them into growth and bloom in a few weeks from their insertion. Garden Roses—Briers, especially the Penzance Sweet Briers, Polyanthas, and other rambling old-fashioned Roses—abound, and make a brave display on each side of the main walk from the public road into the nursery. Most of the leading sorts are worked in breaks or masses by themselves, which adds greatly to the interest and instruction of a ramble through them. Crimson Rambler has found a grand companion here in the new Perpetual Polyanthas, yellow Tea-scented Roses, Aglaia, Anne of Gierstein, as also a charming Sweet Brier with single dark crimson flowers, succeeded by a profusion of clustered bunches of heps. Bardou Job is almost single, glowing crimson. Brenda is another chaste Hybrid Sweet Brier, single, white. Maiden's Blush is peach. Euphrosyne or Pink Rambler is a capital companion for Aglaia or Yellow Rambler. Flora Melvor is a charming single white Rose with striking foliage. Janet's

Pride, almost single, white, tipped with crimson, is one of the earliest and most striking Briers. Lord and Lady Penzance are also among the cream of the Hybrid Sweet Briers, the former a single form, passing to yellow; the latter a soft tint of copper with a metallic lustre, steeped in fragrance. Moss Roses, the white and red Cabbage, the three Waltham climbers, York and Lancaster, &c., were also largely grown.

D. T. F.

**Roses unhealthy.** Could you kindly tell me what disease affects my Roses at this time of the year? It attacks all kinds alike. They lose all their foliage, leaving only the bare stems, making them very unsightly. The foliage is first attacked with a small spot or several spots. These appear to enlarge and spread over the surface of the leaf and finally the leaf-stalk. The leaves, stalks, &c., fall off. In some varieties it takes the colour of iron-rust. The soil was very carefully prepared before the Roses were planted. The sub-soil here is very strong clay, but in parts of the garden there is a great quantity of old mortar rubbish. In preparing the beds I have the worst of the clay removed to the depth of 2 feet or 3 feet, and good loam and cow manure mixed with the best of the remaining soil. The plants are often watered, and should they have insect pests in the spring, syringing with one or other of the insecticides recommended.—J. C., *Herts.*

\* \* \* These Roses are undoubtedly suffering from the effects of a check in their growth, caused possibly by the excessive wet in the early part of the year. We should say "J. C.'s" soil is too heavy, and should recommend that a good portion of the heavy clay be burnt and then thoroughly incorporated with the remainder. Roses on the Manetti stock are much addicted to this rust. There is no better stock than the seedling Brier for such soil as "J. C." has to deal with, as it induces a continuous growth instead of early maturation, as in the case of plants on the Manetti. The artificial watering of Roses is often the cause of much evil. We would rather frequently transplant Roses to newly-trenched land, then with frequent hoeing little or no water would be required even in the worst season. To obviate this rust and black spot, overcrowding should be avoided, and at pruning time the growths must be well thinned; this would allow of a free circulation of air, and consequently good healthy foliage, sufficiently sturdy to withstand attacks of fungoid disease, would result.—ED.

BANANA-GROWING FOR THE MARKETS.

The headquarters of the Banana trade in Nicaragua is Bluefields, until recently the capital of the Mosquito Reservation. For the planter with small means—that is, with a capital of £200 upwards—I know of no occupation so certain to realise a decent income as growing Bananas, provided that the plantation is within easy reach of the sea, and there are steamers to carry his produce to New Orleans, New York, or London. That is of prime importance.

The Banana is cultivated from suckers springing from the roots of an existing tree, generally known as the "stool." These suckers are detached and planted. They strike, and shoot up so fast that it is no great exaggeration to say that you can see them grow. In a year or less the planter harvests the first crop. The Banana has no trunk, but a soft, fibrous, so-called stem, composed of the leaf-stalks rolled one over the other, which grows to from 10 feet to 20 feet in height, and withers after the fruit has ripened. The tree is seldom known to seed. The roots, however, furnish shoots or suckers year after year, until the stool is exhausted. The purple flowers appear on long spikes,

springing from the cluster of leaves which appear to open out from the stem. The flower-spikes are often 4 feet long, and the bunch of fruit which succeeds the blossom comprises from eight to twelve dozen Bananas, weighing from 30 lbs. to 60 lbs. The leaves are from 6 feet to 10 feet long, and from 1 foot to 2 feet wide. When the leaves are newly opened, the tree has a most graceful appearance. For successful cultivation, a cool, rich, and moist soil is required—the alluvial deposits of the river bottoms or the higher land where rain is abundant or water plentiful. Bananas grown on high ground are said to be finer than those of the valleys. In preparing a plantation the trees and brushwood should be cut down, and after lying a month to dry, burned, and the ashes spread over the land. The suckers, which, being very abundant, may be purchased at a low price, are then planted at a distance of from 12 feet to 15 feet apart, or say 200 to the acre. In Mexico, as will be seen presently, they are often planted much more closely, 1000 plants to the acre being common. After the first crop is harvested the stems should be cut down, chopped into short lengths, and heaped round the roots, whence spring the new suckers. A proportion of these only are allowed to grow from the stool; the remainder are removed and sold, or planted elsewhere. The suckers grow as by magic, and bear fruit within the year. It will be seen, therefore, that a large plantation may be formed with the greatest ease, while by judicious management and attention to the time of planting the suckers, a constant succession of crops is secured and fruit gathered every week throughout the year. All that is required as regards after-cultivation is an occasional weeding, say, twice during the year, and the removal of suckers and uprooting of barren stools. When the stems cease to bear fruit, or the fruit is poor, the sooner the roots are dug up and a new sucker planted the better. The expenses of the necessary cleaning and replacing are very small. The only careful work required on a plantation is in handling the massive bunches. This must be done so as to avoid bruising them, or a small black spot will appear, followed by rapid decay. Care is also necessary in gathering the Bananas, but experience has taught the native labourers, when cutting the stems, to gauge the blows so that the first will cause the ponderous bunch to droop slowly until it nearly touches the ground, when another cut severs it from the tree. The Bananas are then collected and carefully loaded into a cart, boat, or railway truck, as the case may be, and conveyed to the nearest port to await the arrival of the fruit steamers plying between Bluefields and New Orleans. Sometimes they are packed in waste cotton from the Ceiba tree, but this is not general. The average price, if sold on the plantation or at the port, is 25 cents U.S. currency (or 1s. 0½d.) per bunch, while if carried to New Orleans they realise from 30 cents to 50 cents per bunch. Some of these Bananas, like a proportion of those grown in Costa Rica, find their way to England *via* New York, and when sound often realise from 7s. to 12s. per bunch; but if intended to be carried so far they must be packed carefully and in a very green state. In the year 1894-95 upwards of a million and a half bunches of Bananas, worth £240,000, or an average price of about 3s. per bunch, were imported from Costa Rica. The value of the Bananas imported into the United States from Nicaragua in a single year has exceeded 600,000 dollars.

At the plantation on the Rama River where I was staying I obtained the cost and profits of plantations of various sizes. The figures given

below relate to one of twenty acres in extent. Land may be purchased at 5s. the acre, or leased at an annual rental of 5 cents native currency (1½d.) upwards. The outgoings are calculated in native currency; the profits in that of the United States.

TWENTY ACRES.—FIRST YEAR.

Dr.	£	s.	d.
20 acres of land at 2 dols. 50c. an acre	...	5	0
Surveying and titles	...	4	0
Clearing	...	40	0
4000 suckers at 25 dols. per 1000	...	10	0
Planting at 10 dols. per 1000	...	4	0
Weeding at 7 dols. per acre	...	14	0
Harvesting: Forty days' labour at 75c. per day	...	3	0
Total cost	...	£80	0
To balance	...	128	6
		£208	6
Cr.	£	s.	d.
4000 bunches at 25c. U.S. currency each on the plantation	...	208	6
Profit	...	£128	6

In the second year two bunches may be expected from each stool, or 8000 in all, of the value of £416 13s. 4d. While the cost of cultivation in the second year will be, for two weedings, £28; removing overplus of suckers, £4 (the cost of which may be covered by their sale or recouped by planting them out); and harvesting, £6—total, £38. The profits of the plantation, therefore, for the second year will be £378 13s. 4d. This will continue until the stools are exhausted, when they must be grubbed up, and suckers planted in their stead. With the plants 15 feet apart the suckers may be planted between them when the first signs of exhaustion appear, so that there shall be no break in the yield of the plantation. As each stool sends up from six to ten stems by the end of the third year, it is possible to reap that number of bunches from each original tree, and four or five stems are sometimes allowed to produce fruit. But the bunches will be much finer if only two stems are permitted to mature; the others, if not sold or required for extending the plantation, should be cut off high up, or bent down, so as not to cause excessive bleeding from the stool, in which case the stool will not only yield finer fruit, but remain in vigorous health much longer than if allowed to exhaust itself.

In a recent bulletin, issued by the Bureau of the American Republic at Washington, it is stated that sixty-nine acres of land will yield 54,000 bunches of Bananas, worth, in the market, a minimum price of 37½ cents U.S. currency, or about 1s. 7d. per bunch = £4275; but I cannot agree with so large a profit. In British Honduras, which offers facilities even superior to those of Mosquito, with the inestimable advantage of a stable government, the profits of a Banana plantation are said by Mr. Morris, assistant-director of Kew Gardens, to range from £12 to £15 an acre after the lapse of eighteen months. But the Banana can be most profitably grown in connection with other crops, for which it serves as a shade plant. For india-rubber, the cultivation of which promises such magnificent profits, it affords admirable shade; also for Cacao, Coffee, Vanilla, &c., as the Banana plantation can be so regulated that it will provide shade all the year round. In Mexico, where 1000 suckers to the acre are often planted, the profits appear to be very

large. The figures given by Sir Henry Dering in a recent Foreign Office report would show that the total cost of cultivating an acre of Bananas, including the purchase of the land, £6 1s. 10d., and the return for the first year £27 1s., a profit of £20 19s. 2d. per acre; while the cost for the second year is under £3, and the return £54 2s., a profit of £51 2s. per acre.

Sir Henry Dering also supplies a mass of information, the greater part of which is equally applicable to British Honduras. We append few extracts:—

The Banana will grow in almost any soil except that composed almost wholly of sand or calcareous matter. The best soil is a warm, well drained, but rather moist, deep loam. The best elevation is 700 feet to 1500 feet above sea-level, but many varieties do extremely well at a moderate elevation in the mountains, provided they are protected from the withering blasts of high winds. The sucker, when planted, should be about 2 feet over all, and four to six months old. It should be placed in a specially prepared hole and when the land is poor a little manure can be put at the bottom of the hole. After planting the earth should be firmly pressed down by the feet all round the sucker. In seven months long spike bearing clusters of flowers, surrounded by coloured bracts, shoots forth from the cluster leaves, and minute Bananas soon appear at the base. During the growth of the plant the land must be kept free from weeds.

Before the plant throws out its flowering stems suckers will make their appearance. While the plant is young all these should be cut away except one. Afterwards, when the stool is matured, from three to five stems may be allowed to grow, which at three or four months old may be sold or transplanted to a new plantation; but on no consideration should a larger number be allowed to shoot up if fine bunches of fruit are looked for. After the stool has borne a crop or two, the earth should be loosened round the stool and manure or decayed leaves and Banana stalks forked in, the whole being moulded up with surface soil. With proper cultivation, a rich soil and a suitable climate, the first crop may be gathered in ten or twelve months from the time of planting, and at all times thereafter.—R. LAND W. CATER, in *Chambers's Journal*.

MOWING BY STEAM.

ANYTHING which lessens labour in gardens will be gladly welcomed. The steam lawn-mower is certainly a great saving of time, and it is much easier to work than an ordinary horse machine. It is very simple and not at all unwieldy, the engine and boiler being fitted on the top of a large or main roller. The machine is so nicely balanced, that it can be turned with more ease than a horse machine. The boiler is composed of a series of copper tubes (sixty in number), a copy fire-box, and the pressure is up to 300 lbs. Water is fed to the boiler by a brass force pump, fitted passing through a heater, and is delivered at a temperature of 180°. The steam is generated in the boiler by using ordinary petroleum, which is burned in the fire-box by a burner similar to that of an ordinary naphtha lamp. The oil is forced to the burner by compressed air, and to start the engine a very ingenious pump is used. The machine when at full working is attached to the gear and gives no trouble. Oil is forced to the burner at a pressure of about 15 lbs. Perfect combustion is obtained, with little smell and scarcely a smoke when in full working. I like the machine on account of its ease in working and the way it does its work. The chimney, which is about 7 feet high, is over the boiler.

The makers give the cost of working as 1s. per hour. Our machine certainly costs more, but it will work six hours without fresh oil. An ordinary labourer works the machine, and I learnt its management in three days. A man

working steadily can do as much work with the chine in one day as would take two with a horse worker. There is no great stress on the worker. I admit he must be active to keep up with the chine, which can be stopped as quickly as a horse drawn by a horse. A 25-inch machine weighs 9 cwt. Ours is a 30-inch, and weighs 14 cwt. I also find it extremely useful for rolling. It forces water grandly by attaching a rotary pump with suction and delivery hose. This is a grand addition, as water can be thrown 50 feet, and at the rate of 2000 gallons an hour. It is invaluable in seasons like the present. The makers also use the engine for various purposes, but I have not done so other than described. This machine is patented by the Lancashire Steam Motor Company, Leyland. G. WYTHES.

## NOTES OF THE WEEK.

**Rosa rugosa Blanc de Coubert** is a very handsome form of this Rose, with blossoms 5 inches across, of the purest white. It is free flowering and perfectly hardy.

**Carnation Sir Wilfrid Laurier** is among the Carnation novelties of the coming year. It is a flower of exceeding purity, a non-burster, while its habit is vigorous. The handsome pure white blossoms are very freely produced.

**Lobelia Carmine Gem.**—This lovely plant is one of the most striking of the herbaceous section of Lobelias, the colour very rich and bright, and flowers freely produced on long spikes. These only-cultivated plants are worth the attention of gardeners generally.

**Bougainvillea spectabilis** is now very attractive with its wreaths of rosy-purple flowers in the greenhouse, where it still occupies a front rank among the climbers. The rich colouring is not attractive, and if not quite unique among greenhouse plants, is still indispensable.

**Verbena venosa.**—Too frequently the rush and novelty does away with many of the tried and useful garden flowers, and this plant has certainly suffered in this way. Quite hardy and easily increased, it may be variously employed in summer with good results either as a groundwork or in mixture with other plants.

**Fruit crops in Lincoln.**—The South Lincolnshire fruit orchards suffered severely from a gale on Wednesday the 17th. In exposed places many trees were almost entirely stripped, and as the fruit is yet unripe, much of it will be unsalable. Most crops are deficient this year, and the loss to growers will be heavy.

**Lematis campaniflora.**—A singular species from Portugal, having numerous small, drooping flowers of a bluish-white shade, on climbing stems. The smallness of its blossoms and their peculiar form render it an attractive species. The large plants are now flowering at Kew, where it is found as hardy as any.

**Fourcroya in Cornwall.**—I am sending you a photo of two plants of *Fourcroya gigantea*. I regret the plants being so close to a dense background of shrubs, which prevents their showing up so distinctly as they otherwise would have done. M. SANGWIN, *Trelissick*.

\* Nobly-grown plants, fine in form.—Ed.

**Lilium Henryi.**—A large group of this Lily is now nicely in flower at Kew, though scarcely so lately in the stems as a year ago. This, however, to some extent may be due to the fact of the buds having broken up, or possibly suffering from the heat of last year. At the same time it is the most beautiful Lily, and one that cannot fail to impress lovers of this unique class of bulbous plants.

**Kniphofia nobilis.**—This is a noble plant in every way. When in a cut state much of its beauty bearing is modified, and doubtless this fact has weighed with the floral committee of the Royal Horticultural Society a week ago, when the plant

failed to obtain an award of merit. That it is one of the grandest of the whole race no one with knowledge of the plant will deny. At the same time it is one of the most striking in colour, and in this respect most valuable.

**Agapanthus umbellatus albus.**—Few of the nearly hardy plants are so useful as the well-known blue form of this, and where large examples exist these create a fine display on many a terrace garden; indeed, it is rather surprising how often the blue form is used for this purpose with no apparent attempt to substitute the pure white form above noted, which indeed is a most useful and valuable kind of the same easy culture as the type.

**Lagerstrœmia indica.**—I quite agree with what is said on this noble shrub by "H. P." (p. 82). I find that it is much more hardy than is generally thought. I have got in my garden a specimen 2 yards to 3 yards high, which was planted against a sheltered wall looking due south more than twenty years ago. It is covered in winter with straw, and every year it blooms profusely. Just now it is a mass of pink flowers. The climate in Geneva is far from mild.—M. MICHELI, *Geneva*.

**Victoria Regia.**—This is now flowering at Kew. It is, we think, more vigorous than usual—at any rate in the large handsome leaves, and particularly so in the depth of the upturned margin. As seen in the fine condition here, it is truly a noble species, equally so in the monster leaves of several feet diameter, and blossoms something like a foot across. Perhaps one of the most remarkable features is the rapid annual growth of the plant when the right temperature is maintained.

**Kniphofia Macowani.**—If this plant can boast of any special merit at all, it certainly must be in its dwarf habit and great freedom of flowering. At the last meeting of the Royal Horticultural Society Mr. Pritchard had quite a large bundle of its pretty and useful spikes, sufficiently small indeed to be of service in a cut state, while its dwarf habit will make it valuable in beds or borders. For a dwarf race of these plants there is still plenty of room if the flowers are bright and freely produced.

**Nelumbium speciosum.**—This handsome aquatic is now flowering beautifully at Kew. On stems nearly 7 feet high are the giant rose-coloured blossoms that are nearly 10 inches across. These handsome blossoms are exceedingly beautiful. Of nearly the same height are the large leaves, these being well-nigh 2 feet in diameter. Apart from the sumptuous blossoms to which we refer are others to follow shortly, judging by the well-developed buds that are nearly full grown.

**Montbretia crocosmiæflora.**—It would be difficult to name any flowering plant suited to the border so pleasing and beautiful as this. The slightly arching spikes give the plant a special value at this season, when a few good clumps are particularly attractive in any garden. Such things indeed merit special treatment, and those who can afford to place a barrowful of loam, peat and leaf soil in about equal parts, with the addition of some manure, to each clump will have an abundant reward in the rich display of flowers in after years.

**Carnation Mrs. Tudway.**—I beg to enclose a few blooms and grass of Carnation Mrs. Tudway. I sent three dozen blooms to the Royal Horticultural Society on the 10th inst., but can see no mention of them in any of the gardening papers. I consider it one of the best hardy Carnations, as it will stand for years without layering and throw flowers abundantly annually. It is the last to come into bloom, and grows about 3 feet high.—A. G. BOOKINGS, *Oldown House Gardens, Almondsbury, Glos*.

\* \* \* A fine, dark, clove-like plant with grass such as is rarely seen.—Ed.

**Lematis heracleifolia.**—This is a most remarkable species from China, with pale blue

blossoms, that individually are not unlike the recurring pips of some Hyacinths, especially those of a pale porcelain shade. The foliage, on the other hand, as implied in the specific name, is widely distinct from that of any other Lematis. It is a non-climbing species, and just now a bed is filled with it at Kew, where the plants are flowering freely. The flowering stems, very peculiar in form, produce large clustered heads, and smaller later sprays of the singular flowers on stems about 4 feet high.

**Lilium tigrinum splendens.**—On the grass at Kew, not far from the Victoria Gate, may now be seen a large group of this Lily, surrounding a colony of *Araucaria imbricata*. In the distance the effect is very good, though less so on a nearer view of the plants. Some years since we were struck by a much more imposing arrangement of Lily and *Araucaria*. In this instance, however, it was the pure Madonna kind, sending up its snowy spires amid the deep, dark green of the *Araucaria*, that produced one of the most striking and effective groups we have ever seen in a garden.

**Campanula G. F. Wilson.**—This pretty hybrid Bellflower still continues to produce many of its distinct blossoms, though more freely in those instances where a slight top-dressing was given after the main flowering earlier in the season. But even this does not compare with that portion of the stock that was divided and transplanted in the month of March. All these have bright fresh tufts of leaves and are flowering profusely, though of course the division of the plants interfered with their blooming at the right season. The gain, however, comes in maintaining a good succession of flowers.

**Two new Bamboos.**—I have received from Japan this spring two Bamboos, which appear to be new to western gardens. 1, *Phyllostachys fulva* (Japanese name, *Ogon chiku*)—a *Phyllostachys* of the same type as *P. nigra*—not yet sufficiently advanced for me to be able to describe it in detail. It promises to be very ornamental. 2, *Arundinaria metallica* (Japanese name, *Kan'eyama Daké*, or *Shakutan chiku*), a dwarf species, closely allied to *Arundinaria Veitchii*. Both these species should, from their geographical position in the Japanese islands, prove hardy in the average English climate.—A. B. FREEMAN MITFORD.

**Hydrangea paniculata grandiflora.**—In the open bed this fine plant is now flowering freely, the pure white panicles of blossom being well formed and of large size. In the greenhouse the heads of blossom are even purer, and among other plants most effective. For the large conservatory this handsome shrub is worth growing in large tubs. The plant will bear rather hard as well as close pruning, and where this is carried out and the plants are growing in a deep bed of soil, some noble heads of bloom are the result. Liquid manure may be employed as soon as the trusses are well in sight.

**A hybrid Poppy.**—I enclose some flower buds and leaves of a hybrid Poppy which has flowered in my garden for the first time this season. It appears to be *Papaver rupifragum* × *orientale*. The flowers are similar to those of *P. rupifragum*, but from 3 inches to 3½ inches in diameter, and are produced at intervals along a stem from 2 feet to 3 feet in length. Many of your readers have no doubt seen a similar hybrid from Mr. Carrington Ley's garden, but in his plant the flowers are produced singly at the end of the stem, in the same way as in *P. rupifragum*, and are of a deep orange-red colour.—E. C. BUXTON, *Coal Dorr, Bettws-y-Coed*.

**Asclepias tuberosa** is noted in THE GARDEN of July 31 as being "one of the most distinct plants in flower now." The same applies to it, as I see it frequently wild by the wayside in New Jersey. Perfect exposure to all the sun possible seems of more importance than special composts; indeed, here are magnificent plants growing with little or no soil at all on stony railway slopes or along the fringes of rocky woods, and the most casual observer cannot fail to note their beauty

with flowers so distinctly rich in colour. Its relatives prefer swampy ground, and are also very abundant in this district, but they cannot compare with this one in point of beauty even in all their natural luxuriance.—A. H., *Madison, N. J.*

**Eryngium planum var. celestinum.**—This pretty Sea Holly is one of the neatest habited of its kind, while the pretty globular heads that form the chief attraction in these plants are very freely produced. When in the mature state the colour is attractive, and small sprays are very useful in vases or epergnes. At the present time in the rock garden and border it is very pleasing.

**Polygonum Baldschuanicum.**—Notwithstanding that this species has been flowering profusely for some time past in the herbaceous ground at Kew, it is worthy of note at the present moment that it is in no wise exhausted by the heat and drought of the present year. As has been stated previously, it is a climbing species, possessing among these plants a claim to very considerable popularity. The elegant sprays of blossom are white, with just a faint tinge of pink that produces a very pleasing result.

**Lupinus arboreus.**—In the very light and warm soils of the Thames valley, this plant succeeds admirably, and never fails year by year to produce a most welcome display of its blossoms. Of its liability to go off occasionally I have not the same experience as Mr. Arnott, though severe frost will at times with old examples play considerable havoc. To the uses given at page 124 and of its value in the shrubbery I would like to add its adaptability to cover a west wall with but little trouble. For years I had a very fine example in this position, where it luxuriated in quite common soil, and the severest frost left it unharmed. It does not receive due attention in gardens, and though naturally shrubby in habit has a very pretty effect on a wall.—E. J.

**The Prairie Rose (R. setigera).**—The writer of the paragraph concerning this Rose in THE GARDEN of July 31 (p. 92) must surely have made mid-day observations of it only to have come to the conclusion that the flowers lack fragrance. I would class the Prairie Rose among the sweetest of Roses, and I know of nothing more delightful than a bunch of its clusters cut in the early morning while yet fresh with dew. At day-dawn and in the evening the bushes here scent the air for yards around. In the bright sun, however, the flowers wilt and are scentless. In the house the buds continue to open and the clusters keep fresh several days. The Prairie Rose should be planted where it can have free scope, and it is doubly valuable for its lateness of blooming.—A. H., *Madison, N. J.*

**The fruit crops in Cambridge.**—There is an extraordinary falling off in the chief part of the Cambridgeshire fruit harvest this year. Green Gages and other kinds of Plums, for which the district is famous, are almost a failure. Orchards from which, in a plentiful season, tons of Green Gages have been consigned in a single night to the London and other markets have in some cases practically none at all this year, and in most instances such a very slight crop that the enhanced market price cannot possibly recoup the numerous growers who cultivate this famous fruit. Pears, on the other hand, are abundant, and Apples, in many cases, are fairly plentiful, though it is not always the best sorts that are most prolific, and nothing in this direction will quite make up to the district for the loss in the harvest of Green Gages and other kinds of stone fruit.

**Clematis Viticella alba.**—It is very difficult to find a reason why such a good, useful and free-flowering summer climber is not more generally seen. Now and again a large plant is seen many feet high completely laden with its pure white blossoms. One very fine example we have seen of late occupying a south-east wall has been a perfect sheet of its pure white flowers for nearly 30 feet high and some 12 feet or more in width. That the plant has occupied the same position for some considerable time there is little doubt. Notwithstanding its position, which does not impress

one as being the most favourable, the plant flowers abundantly for weeks each year in July and August. Singularly enough, little sunlight reaches the plant, owing to a rather thick shade of Birch and Chestnut from an adjoining garden. This fact in nowise prevents the plant flowering abundantly each year.

**Lilium auratum rubro-vittatum.**—There is no more beautiful Lily in the whole genus than this, though it cannot be described as the most useful or the most easy to manage. It is but rarely indeed that any imported bulbs of it ever give a second bloom in this country. Under these circumstances, any Lily that holds a position quite unique among its kind is worth a special effort to obtain home-raised stock, and, if possible, to procure good flowering bulbs at home. To achieve this, a beginning must be made with scales of the variety in question, which should of course be secured from a reliable source to start with. Having detached the scales, place them in a cool and not too damp cellar in rather moist cocoa-nut fibre, and allow them to remain for some time. By making a start in the coming autumn with fresh scales a few small bulbs may be secured in the following year, to be grown like seedlings for a time. Of course it will take a few years of patient working and waiting, but if successful, all this will be repaid, and if not, some interesting information should be gleaned by the experiment in the hands of any intelligent amateur gardener.

**Notes from a Cornish garden.**—Heavy rain this last week has rather spoiled the flowers, but this summer flowers have been very good. As I write, Callirhoe involucrata is flowering well in the rock garden by the side of Tournefortia heliotropioides, which wintered out. Cyananthus lobatus is a mass of bloom, and Arctotis speciosa and A. aspera var. arborescens seem to thrive on a sunny bank, where also many of the Mesembryanthemums are still flowering. In the south border Hunnemaunia fumarifolia has been bright ever since June, and a single flower of Gerbera Jamesoni, now fading away, has been out three weeks. On the south wall Cassia corymbosa is a blaze of yellow. The white Swainsonia was planted out last August, and is now covered with bloom. Nandina domestica is at its best, and Eucomis punctata and Amaryllis Holfordi are both in flower close to the wall. Senecio Heritieri has been much admired here this year. Rudbeckia laciniata never did better. R. pulcherrima is good, but R. speciosa is not flowering so well. Lobelia Feuillei has many spikes of flowers. Malva lateritia is bright, and Phylisal Franchetti wintered out, and seems to have a very strong habit. The seedling Pentstemons are splendid, and show marked improvement in size and shape on the old varieties. Cyclamen hederifolium has been in flower in the grass since July 26, and Colchicum autumnale has been in bloom just a week.—C. R.

**Paris Chrysanthemum committee.**—The fourth issue of the bulletin of this committee has recently come to hand. Among its contents are a list of the officers of the committee, the names of the members composing the society's floral committee, regulations and schedule of prizes for the forthcoming show in November next, several short articles upon Chrysanthemum subjects, and a list of the members of the committee, among whom we notice such well-known Chrysanthemum specialists as Messrs. Brunt, Calvat, Charmet, Cordonnier, Conillard, Crozy, Daupias, Délaux, Fatzer, Heraud, Hoste, Lacroix, Nonin, de Reydellet, Rozain, Boucharlat, H. de Vilmorin, &c.

**The weather in West Herts.**—Taken as a whole, the past week has been about reasonable in temperature. There occurred one cold night, that preceding the 13th, when the exposed thermometer fell to within 7° of the freezing point. Although the temperature of the ground has fallen since the beginning of the week, it is still 3° above the average both at 2 feet and 1 foot deep. During a thunderstorm on the afternoon

of the 18th nearly a quarter of an inch of rain fell, and for eight minutes was falling at the rate of 1½ inches an hour. No measurable quantity of rain-water has now come through either percolation gauge for over five weeks, and not at all for eighteen days. Since the 4th the wind has blown almost exclusively from some point the compass between south and west.—E. J. *Berkhamsted.*

**Fungus on Saxifrages.**—Herewith I send you rosettes of Saxifrage attacked with a fungus which eventually kills the plant and is very contagious. I originally had it on a plant I bought and from that plant it has spread all over the garden, but only on the leaves of encrusted Saxifrages. I suppose the spores fly about in the air or do you think the spores may be in the soil and get up to the leaves through the roots? I think this because you can generally see the "spores" forming in the centre before it breaks open on the surface of the leaf to release the spores. I should be greatly obliged if "G. S. S." can tell me what it is, and if there is any cure.—LORDSWOOD.

\*\* No doubt the fungus on your Saxifrage has spread from the one infested plant, the spores being carried about by the wind. I do not imagine for one moment that the spores are in the soil. When a spore falls on a leaf under suitable conditions it begins to germinate and penetrates the skin of the leaf, and the fungus grows and creases within the leaf. Then at a certain period of its growth the reproductive organs are formed on the surface and spores are produced, which are wafted about by the wind. I should pull up plants which are badly attacked and spray others with Bordeaux mixture, which is made as follows: Dissolve 1½ lbs. of copper sulphate in little warm water, slake 1 lb. of freshly-burnt lime and make it about as thick as cream with water, then strain it through coarse canvas and the copper sulphate, add 11 gallons of water and stir thoroughly. Spray twice at an interval of four or five days. Next year keep a sharp lookout for this pest, and as soon as you notice it spray all the plants and again in a week's time G. S. S.

#### HONOURS FOR GARDENERS AND FARMERS.

I THINK the note (p. 116) rather severe on gardeners. Doubtless, from the writer's point of view, it is not an honour to accept an award or of merit, but as the recipient of the honour (not any way solicited or expected), I briefly give reasons for accepting the same. I consider it a Jubilee honour, and I fear the writer at p. 116 overlooks this. Again, is it not well to encourage merit? I do, and hope the honour will not be used in a swaggering way. I am of opinion horticulture has not received its proper recognition during the Queen's reign. When we see the medals and honours given to soldiers, sailors, statesmen and others eagerly accepted—indeed, looked for, perhaps the writer will be less severe on gardeners who have had so little done for them.—G. W.

\*\* We were not severe, we hope. It was the general effect of orders of merit that was criticised; and there are the loss of time, the money wasted and the disappointment of many to be thought of. Many of those who had the medals are our friends, and we feel sure no better choice could be made, but it was, and we hope always will be, the pride of all good gardeners to love their work for its own sake. Besides, in other walks of life than our own it is notorious that the bestowal of academic and like honours is not in the end for the good of art, and that in the end is the question.—ED.

**Celestial Sweet Brier.**—Do any of the readers of THE GARDEN happen to know the name of which at one time occurred in *Rosae* books? I now fail to trace it, and shall be grateful for any information.—ROSA.

**Name of fruit.**—*Chas. Simpson.*—Apple, Canada head.

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## ORCHIDS.

### VANDA SUAVIS.

The habit and general appearance of this noble orchid render it an attractive plant whether in flower, while the delicacy of the blossoms is not surpassed by any in the genus. While looking through the fine gardens at King's Weston, near Bristol, recently, I noticed a fine plant of it in flower. It is a large specimen, bearing two racemes of about twenty flowers each, the individual blooms of fair size and richly tinted. To grow this Vanda well, a airy large house is best, and one kept at an intermediate rather than a very high temperature. Here growth will be quite free enough, and as the plants can be arranged at a considerable distance from the glass, a heavy shade is not required. Thus the growth made is of a lid character, not liable to be easily injured, and, owing to this, the winter temperature can be kept low without danger and the plants rest. If kept at a minimum of 50° they will take no harm and are far more likely to bloom freely than if kept warmer. All this class of Orchids require plenty of room for root and top growth; the pots or baskets used may therefore be fairly large. Good drainage, too, is essential and an open compost. Nothing but Sphagnum Moss and charcoal must be used for the latter, the charcoal being most useful in lumps as large as a hen's egg for large plants, and for smaller ones in proportion. When repotting or rebasketing, the base of the stems will sometimes be found to have decayed and the removal of the worst parts is advisable. If a large specimen becomes unhealthy without apparent reason, it may in early spring be shaken clear of the compost and examined. If found in bad condition, let every part of it be well washed and place it in a smaller receptacle of clean crocks and charcoal only for a few months, this often causing the emission of fresh young roots and having a good effect upon the future health of the plant. It is at this time that a little more warmth and

a closer atmosphere is desirable—a kind of convalescent treatment, in fact. But when growth is again active and roots are being freely produced, the plants may again have their usual treatment, as growth made in too much heat is not usually satisfactory. A good deal of the leaf-dropping common in Vandas during winter and early spring is attributable to this cause. The plants having attained a good hold of the new pots, a surfacing of Moss may be given, and this may be added to as occasion requires, always adding these to plenty of charcoal or placing the two materials in layers. It is good policy to take off a young piece or two of this Vanda occasionally and set it growing by itself, as should anything happen to large, old specimens, these may by judicious massing be made to take their place in a few seasons. Indeed, it is questionable whether any advantage accrues from keeping very old plants, for the further the heads get away from the compost, the weaker the growth and fewer in comparison are the flowers produced. If by placing a plant against a wall and providing a hold for the upper tiers of roots these could be kept healthy and fresh, no doubt the condition of the plant could be maintained almost indefinitely, but in most cases this is impossible, or, at least, not convenient. The state of the atmosphere has considerable effect on the well-being of Vandas. They like moisture, they like a free supply of fresh air, and in limited quantities ammonia, which may be generated by frequent damping with soot water, or sprinkling scot and lime in places out of sight in the house. Given this continually, there is no need to be always swilling the roots with water. By all means give enough to keep them healthy, but let them seek it themselves, as indicated by the fresh green tips of the roots before watering heavily in spring. V. suavis is closely related botanically to V. tricolor, the chief difference being in colour. It is a native of Java, occurring at considerable elevation often near the coast, and was discovered by Mr. Thomas Lobb, who sent it to Messrs. Veitch in 1846. R.

**Oncidium dasytyle.**—The dark purple callus upon the labellum of this Orchid renders it easily distinguished from all other species. It is a charming and free-flowering little plant frequently met with in good order. The pseudo-bulbs, slightly furrowed, are each about 1½ inches high, this dwarf, compact habit rendering it suitable for cultivation in small pans or baskets. In a light part of the Cattleya house, with abundant moisture while growing and a distinct resting season, it is usually satisfactory.

**Cattleya Warneri imperialis.**—This is a very fine variety of C. Warneri, and a plant of it was in flower recently with Mr. Bull. In size it is much superior to the type, and the colour is magnificent, the lovely crimson-purple on the front lobe being especially rich. It does well at the warmest end of the Cattleya house, and if suspended from the roof all the better. The plants must be induced to rest as far as possible during late autumn and winter.

**Dendrobium Vannerianum.**—This is a very pretty hybrid Dendrobium raised by Mr. W. Vanner, of Clislehurst, and the result of crossing D. japonicum with D. Falconeri. It retains much of the shape of the latter fine kind, but the colour is different. The sepals are long and lance-shaped, and upon a pure white ground there is a very faint margin of purple, this tint being repeated in an apical blotch on each petal. The lip is also white, with a light yellow disc, this being more or less marked with a very bright purple. A plant of it was recently in flower at Messrs. Veitch's.

**Cattleya Mossiæ Reineckiana.**—There are many fine sub-varieties of this Cattleya, as indicated by its being so freely exhibited, but one of the brightest and best I have seen was recently in bloom with Messrs. Veitch in the Chelsea nursery. The outer segments were of the purest white, the finely-shaped lip having the usual yellow area, but the purple streaks about this were very distinct. The flowers were large and of great substance, and altogether, it is one of the finest and most chaste Cattleyas in existence. It requires the same treatment as the typical form.—R.

**Oncidium macranthum hastiferum.**—Although not so bright as the typical O. macranthum, the colours (yellow and brown) in this variety are very nicely blended. The plant is not quite so

strong growing as the typical form, but equally free-blooming, the long, scandent scapes having a fine appearance loosely arranged among other Orchids. Plenty of water at the roots and a cool, moist atmosphere all the year round are essential to its successful culture. Care is necessary that insects do not eat the young roots that often appear above the compost fine.

**Angræcum falcatum.**—This pretty little species is seldom seen, but it has an exceptional interest in that it is not a native of the African continent or islands, but Japan, where it was discovered many years ago. It is, in fact, one of the very oldest known kinds, and, unlike the other species in the genus, requires cool or intermediate treatment. It grows only a few inches high, and produces a small bunch-like spike of flowers from the upper part of the stems. These are yellowish white, with a curved spur about 2 inches long. It should be allowed a light, fairly sunny position, and be grown in clean Moss and charcoal in small baskets or suspended pans.

**Masdevallia Harryana.**—The blossoms of this fine species are now getting past their best, but I noted several fine varieties in bloom this week. One of the best of these is M. H. violacea, having a distinct violet-purple tint in place of the deep crimson of the type. Its culture may be almost exactly the same as for all in this section, and it is not difficult. August is the safest time to repot, using a thin compost of peat fibre and Sphagnum over good drainage. By this means the plants take a good hold of the compost before winter, and are not, therefore, so likely to suffer from any check that may then be experienced.—H.

**Oncidium curtum.**—Several fine plants of this species have recently come under my notice, one in a neighbouring collection carrying seven of the brightly-tinted spikes. In this condition it is a really fine Orchid and worthy of all care. It is a native of Brazil, consequently it needs more warmth than the Peruvian kinds. In a medium-sized pot or basket of good open compost it does well, and may as regards its growth be classed with such as *O. Forbesi* and *O. crispum*. It delights in copious moisture both in the atmosphere and at the roots while growing, and may be kept just moist when at rest.—H. R.

**Cattleya Harrisonæ.**—This pretty plant I noted in good order at Malmaison. There are several varieties of it, but the type is as pretty as any of them. The flowers occur on the apex of the young growth on erect racemes, and are individually about 4 inches across, the rosy sepals and petals reflexed and showing off the lip, which has a dense yellow eye, to perfection. No particular difficulty will be found in its culture provided the plants are healthy for a start, but many species have greater recuperative powers. An ordinary Cattleya temperature and good open compost are requisite. It is an old Brazilian species, and was introduced by Mr. Harrison in 1836.

**Spathoglottis Fortunei.**—This fine species I have noted in flower in several places recently. Each flower is about an inch and a half across, and eight or nine are produced on each spike. The sepals and petals are bright yellow, the lip having brownish tips to the lateral lobes. After flowering, this plant soon begins to lose its foliage, and the water supply must then be gradually diminished, until during the winter months very little indeed is required. At this time the plant may be grouped in a cool, fairly dry house, but a little more moisture and warmth are necessary when growth is active. It may be grown in pots or pans in the usual compost recommended for terrestrial Orchids. It is a native of Hong-Kong and was sent to Chiswick by Fortune about the year 1844.

**Cattleya crispa.**—A fine plant of this old species is now flowering with Capt. Belfield, of Malmaison, Frenchay, near Bristol. It is in good health, about a couple of feet across, and bearing thirty fine flowers. Although the lip of this species is not so finely developed as that of many

known kinds, it has a charm of its own in the undulate crisped margin and bright bit of colour. It flowers, too, at a season when first-rate kinds are getting over, and this alone should be sufficient to make it more popular. It is not exacting in its cultural requirements, and if a few of the large old specimens that used to be common enough were now exhibited, they would surely command a good deal of attention. The flowers are of medium size with narrow segments, pure white on the sepals and petals, the lip bright purple. It first flowered in England in 1826, in the autumn of the same year that it was sent from Rio de Janeiro by Sir Henry Chamberlain.

**Cypripedium oenanthum superbum.**—This is one of the best Cypripediums of the week, and is in bloom in many places. It is one of Messrs. Veitch's hybrids, and the reverse cross to that which gave the typical *C. oenanthum*, viz., *C. insigne* Maulei and *C. Harrisonianum*. The leaves are only slightly variegated, but the flowers are large and handsome. The dorsal sepal is deep reddish purple at the base, passing to nearly white at the margin, the entire segment being overlaid with lines of rosy purple spots. The petals are clear brownish yellow at the base, merging into a much deeper tint above, while the lip is a rich vinous purple externally, with a yellow spotted throat. As may be imagined by the parentage, it is a strong, robust grower and thrives well in an intermediate temperature, provided the roots are in good material, kept moist, and no insects allowed about the foliage.

**Dendrochilum filiforme.**—The graceful pendent racemes of flower produced by this Orchid have been not inaptly described as like gold filigree chains. Not only are they charming in appearance, but delicately scented, and they make a distinct and charming addition to the species now in bloom. Some nice plants I noted in flower last week were carrying each about twenty spikes, and the effect of these hanging from the young green growths was very fine. They appear in the earlier stages of the plant's development; consequently when in flower the roots should not be dried. The plants are of a tufted habit, with small pseudo-bulbs and narrow green leaves, and they thrive well in a moist, warm house, planted either in baskets or small suspended pans. Plenty of water must be allowed even after the blooms have fallen until the growths are quite complete, when less heat and water necessary. Thrips are fond of the rather succulent foliage and bloom, and are apt to put in appearance when the flowers are just opening. The usual remedial measures should be taken for their destruction and every endeavour made to keep them out of the house. *D. filiforme* first flowered in England in 1841, having been sent home to Messrs. Loddiges by Cuming a few years earlier.

#### ZYGOPETALUM GAUTIERI.

THERE are few more attractive species than this in this somewhat extensive genus, and it is, perhaps, as easy as any to grow when well established. In habit it resembles the *maxillare* and *rostratum* section more than *Z. Mackayi* or *Z. crinitum*, but it is more robust than either of the first-mentioned kinds. A plant I noticed in flower recently was carrying three spikes—twenty flowers in all. Each of these is about 2 inches across and has a fine deep purple lip. To grow it well there is nothing to beat a large piece of Tree Fern stem, the roots having a great affinity for this material and thriving well upon it. Once established in this material the most ordinary treatment suffices to keep it in good health, simply because the rhizomes do not carry the young leads out of the way of a root-hold. When they are inclined to leave it, it is only necessary to tie or peg them down, while when they grow over the edge of a pot or pan it is more difficult. Rafts, too, are excellent if the stems cannot be obtained, and if the leads are placed a good distance from the edge the plants go on almost indefinitely. These of course must be lined with

a little compost of some kind, equal parts of Moss and peat serving as well as any. The rhizomes may easily be pulled down to the raft by passing a wire between the rods, and, owing to the free circulation of air obtained, the roots do well under this mode. Of course the great advantage in either of these ways of cultivating it—that disturbance need not be frequent, but grown in pots or pans, on the other hand, they so require a shift owing to the reasons above noted. Perhaps the best time to replant is when the young shoots are starting, as new roots generally appear about the time the plants are in bloom and these give them a hold on the new material. No dry resting season is necessary, but a thorough ripening of the pseudo-bulbs is conducive to free flowering. This ripening is different to that of *Dendrobium* for instance, and is brought about more by a plentiful supply of fresh air than by excess of sunlight, which would be detrimental to the foliage. The worst insect enemies are spider or brown scale, but neither of these is troublesome in a moist atmosphere properly balanced. An intermediate temperature suits it well, such as a shady part of the Cattleya house. It is a native of Brazil, introduced in 1868.

**Oncidium Kramerianum.**—This beautiful Butterfly species is seldom without a flower open and plants having several spikes may be said to be constantly in flower for at least eight months out of the twelve. I have seen it in flower several collections during the week, and natural a good deal of variation exists, but there is not single one that could not be described as good. It is easily grown in a suitable temperature, and likes abundant atmospheric moisture, especially while growing freely.—R.

**Cypripedium niveum.**—This beautiful species is now in bloom, and is one of the prettiest in the genus. From prettily variegated foliage the flower-spikes rise about 8 inches and the blossoms are nearly pure white, the only colour being few spots of purple. It does well in the warm house in a shady, moist position, and may be grown in small pots of peat and moss with a little limestone. Messrs. Veitch first imported this plant about 1868 from some of the islands about the Malay Peninsula.

## KITCHEN GARDEN.

### PEAS OF MEDIUM HEIGHT.

TAKING one year with another and judging the Pea crop in the aggregate, it appears to me that the best results are obtained from a good selection of varieties of medium height or, say, which run from 2½ feet to 3½ feet. These are certainly the Peas which give the least amount of trouble combined with good crops, and there are now in cultivation a sufficient number of good and distinct varieties of this type to bridge the whole season through, so that neither the very dwarf nor the very tall varieties need be grown unless desired. One of the earliest in the section is *St. Osyth Gem* which closely follows *Chelsea Gem*, but is quite distinct from that popular variety and runs about 3 feet high. The haulm and pods are of a very dark green colour, as are the Peas themselves, and the flavour is excellent and well in advance of the most early Peas. To follow this nothing can beat *Dr. Maclean*, an old favourite and one of the best of Peas judged from any standpoint; it has the merit of doing well in all sorts of weather, and this is a characteristic which it shares with other variety of a similar type, viz., *Gladiator*, very hardy and good cropping Pea which, however, requires sugar. After the above-mentioned are over there is a wide selection, including such fine varieties as *Carter's Seedling*, a very deep green, free cropping, and large podded variety of the best quality; *Veitch's Main Crop*, very similar to the foregoing in all respects, and *Carter's Majestic*, with paler coloured pods and Peas of

ne flavour and full in the pod. Danby Stratagem, which is probably a taller and better coloured selection from the old Stratagem, must also be included amongst these main crop varieties, and its chief characteristic, in addition to the good qualities of its progenitor, is that it is continuous fruiting and stands the drought well. Included also among the Peas of medium height and of high quality are Senator, a very free cropper, and, for the latest crop, Autoerast, a Pea that will hardly be surpassed for late work, and which has with me entirely ousted another good late Pea, viz., Sturdy, which for some years provided the latest crops. In these notes I have not exhausted the list of this section of Peas. Possibly there may be others as good as those I have named. My object has been to draw attention more closely to the value of Peas of this type for gardens generally.—J. C. TALLACK.

**Cauliflower Eclipse.**—This is a grand dry weather Cauliflower for late summer and early autumn cutting. Until I first grew it I found it difficult in making the summer Cauliflowers meet those of autumn, and could never entirely depend on doing so in spite of frequent sowings. At Walscheren, but with Eclipse to fall back on these difficulties have disappeared. I have now (August 16) been cutting for some weeks from this variety, and shall do so until the Autumn plant comes in. In habit Eclipse appears to be intermediate between the two varieties mentioned above, but the heads have none of that looseness often to be met with in Walscheren, and are quite solid and large, without being coarse.—J. C. TALLACK.

**Globe Artichokes and drought.**—The Globe Artichoke suffers badly in hot, dry summers unless well fed, watered and mulched, but even with these precautions red spider attacks the joints and ruins the healthy foliage, thus crippling the growths. It is well at this season if the joints are at all distressed to cut the bearing stems within a few inches of the soil. By doing this new growths are encouraged and the plants in a better condition before winter sets in. When much exhausted during the summer months they need a little extra care from now till October. Even this, there will be a full crop well into the autumn, and in many gardens late Artichokes are appreciated when choice vegetables are getting past their best. Few vegetables will repay for liberal supplies of liquid manure better than Globe Artichokes at this season, and the plants will take stronger doses than many others. Failing this, a dressing of well-decayed manure with copious supplies of moisture will assist the new growth and build up new wood for winter. Plants in any way neglected now make a late growth. This growth is soon injured in severe weather.—H. B.

**Cabbage sprouts.**—I am not sure that "C. D." (p. 120) would advise us to grow Cabbage sprouts in preference to Cabbage. I have for some years followed the practice of growing Coleworts even for November and December supplies, and I find the Coleworts more valuable than Cabbage sprouts. I am aware it is an easier matter to cut over Cabbages that have produced heads and allow these to produce shoots, but these are their best are not equal to a well-grown Colewort, and in my opinion much inferior to an autumn Cabbage. It may be asked, what is an autumn Cabbage? My reply is, Cabbages sown for use from October to Christmas, such as Sutton's Little Gem or Favourite. These grown specially for autumn use are far superior to those cut over, which may be termed sprouts. Again, we have the St. John's Day and Christmas Drumhead, splendid types of autumn Cabbage and well worth special cultivation for winter supplies. These are very hardy and of good quality. When once sown they will be much liked. I think allowing plants to produce sprouts robs the soil, as the Cabbage is a gross feeder. I admit that to leave plants which have produced heads is the simplest plan, and where labour is scarce it is commend-

able, but for quality I would advise autumn or winter Cabbage, not sprouts.—S. M.

**Sugar Peas.**—These are much liked on the Continent, but rarely seen in our gardens; indeed, as regards novelties in vegetables, we are very conservative, and year after year grow the same things and pay little attention to new kinds. I am aware the Sugar Pea can scarcely be called new; it is well known abroad; but in a dry season like the one we have just passed through this Pea is well worth growing, as, gathered in a young state, it can be cooked whole or cut up like the French Bean. The best way is to cook the pods whole, but of course they must not be allowed to get old or stringy. In a young state they are very fleshy and of excellent flavour. I am surprised a vegetable of so good quality should be so little grown in our gardens, as many would prefer it to Broad Beans or even the Scarlet Runner. There are several varieties, some much thicker than others, with broad pods, and the grower must not expect fine Peas, but size and substance of pods are the points aimed at. Culture is simple. Sow thinly in good land and every three weeks or a month to give a long supply. I prefer the pods cooked whole, not cut in any way; they are delicious if young.—G. W. S.

**Onion Record.**—I am sure many will agree with "Grower's" good opinion of this Onion at p. 136. I think if the writer had seen the splendid bulbs staged at the great show of vegetables at the last November exhibition of the National Chrysanthemum Society, he would have been delighted with such perfect specimens and so many of them. I do not place too much value on the variety named simply because it is an exhibition kind, but for its general utility, as I find Record one of our most valuable Onions. Its perfect shape and excellent quality make it a desirable kind for all gardens. Like "Grower," I much admire its fine globular form, and I notice these shaped bulbs, no matter how large they are grown, are superior keepers to the flat ones. I saw sound bulbs of this well into April. This shows its value, and when grown with only ordinary culture it is one of the best, as there is no difficulty in having it good late into the spring. Last year I sowed it at this date and with great success, as our roots, with only ordinary culture, are very fine, and were not affected by the heat and drought as badly as the spring sown. In gardens much troubled with the grub it is an excellent practice to sow seed in the autumn and finer produce is obtained.—G. WYTHES.

**Pea Model Telephone.**—This new Pea tried this season proves a wonderfully prolific variety, and a valuable introduction for sowing early. It is a main-crop Pea, but I advise it for what may be termed a second early, as, if the cultivator divides the season into four, this variety is specially good to follow the first earlies. It is a selection from the original Telephone sent out some years ago, and a good variety too, but this is superior. A few growers of the older Telephone found a difficulty in getting a true stock. With Model there is a better growth, and as regards crop, it is much superior to the older form. With me it only grew 4 feet high, but doubtless the heat and drought were answerable for this, as I saw it at least 5 feet high in heavier soil. There are from nine to ten peas in a pod, and the quantity of pods for such a large Pea is wonderful. I am not a great lover of coarse things, but Model Telephone is not coarse, as the peas, though large, are of excellent quality, while the plants are more vigorous.—G. WYTHES.

**Vegetables at Shrewsbury.**—These garden products are always seen in great force at Shrewsbury when the annual exhibition of the Shropshire Horticultural Society takes place. But whilst the western district of England seems to be specially favourable to vegetables, and cottagers undoubtedly show up well, local growers of the gardener class seem somewhat afraid to enter into the open classes in competition with some who have made very high reputations as growers and exhibitors. The first-prize collection

in Messrs. Sutton and Sons' open class was, to his credit be it said, won by a young gardener from Wales, beating some famous antagonists, and that fact should encourage some others to enter the lists in the open classes another year. In Messrs. Webb and Sons' open class the prizes went to Pope, of Highbere; Bowerman, of Hackwood; and Wilkins, of Henstridge, respectively; and in Messrs. Sutton and Sons' class, Pope, Bowerman, Waite, and Wilkins took the other prizes, so that the southern men almost exclusively held the field. That fact shows that in spite of the long drought experienced vegetables can be grown as finely south as anywhere in the kingdom. Although no collection was perfect, yet in each collection some had perfect examples, as, for instance, Fester's, of Wales, Tomatoes, Pope's Cauliflowers and Peas, Bowerman's Potatoes and Runner Beans, Wilkins' Celery, Waite's Cucumbers, &c., all of which if in one collection would have presented a degree of excellence unbeatable. The best average collection, undoubtedly even, refined, good, was Pope's, which took Webb and Sons' first prize.—A. D.

**Large Peas.**—I am pleased "W. S.," Wilts, in his excellent article on Peas (p. 118) noted the value of large Peas. I had never heard of anyone objecting to them. I am aware for special purposes there may be a demand for small Peas, but have never found any difficulty, as if small Peas are needed we can gather before they are fully matured. On the other hand, cooks will not have the small, round, white Peas, and I do not grow them. I should think that the large Peas "J. C.," objects to must have been extra large or past their best, as the new varieties are, in my opinion, a great boon to the grower. Stratagem is still one of the best Peas grown. It may be termed large if the white rounds are taken as the right size for use. For many years I have noticed these large green pods stand drought well, and this is a point worth attention where Peas do not thrive well.—L. M.

**Pea Danby Stratagem.**—Having for many years grown the older Stratagem, I was curious to test the newcomer against the old, and so grew the two side by side. I have come to the same conclusion as Mr. Crawford, viz., that the newer kind is an excellent selection. As most growers know, unless there is rigid selection of the seed stocks, there is a tendency to go wrong. Stratagem Pea of late years has been excellent, but there appears to be more vigour in the newer kind, and an absence of pale pods. It is a fine early pea, and this is a great gain; it is a splendid cropper, and of first-rate quality. It crops close down to the soil, and the pods are mostly produced in pairs, the haulm of a deep green, strong and vigorous. For years I forced the older variety on account of its cropping, as when gathering commenced it gave quantity in addition to quality. The Danby being earlier will make it more valuable.—G. WYTHES.

**Late market Peas.**—There are a few reasons, well known to market growers, why they do not grow breadths of late Peas, as suggested they should do by "Grower." I have put the same question to market gardeners frequently, and always obtained the same replies. The first is that the land occupied by Peas is always needed for filling up as early as possible with succession crops. That could not be done in the case of late Peas such as would be giving crops through August. Of course, it may be said that the rows might be placed wide enough apart to enable plants to be put out between them early, but everyone familiar with market field Pea pickers know that plants so put out have such rough treatment, apart from their being half starved by the earlier crop, that they seldom pay to stand after the Peas are removed. Then there is the undoubted fact that the ordinary town consumer soon tires of Peas, or indeed of any other green vegetable, and a month of Peas usually satisfies his requirements. Then the Runner Beans come in, and these become such formidable competitors in the market with late Peas, that the price even of a good fresh sample

of the latter is low. Then, so far as London is concerned, the classes who can afford to pay higher prices are largely out of town. Possibly it might pay to grow late Peas in the neighbourhood of watering-places. There is, too, a good deal of risk attached to late Peas, arising from possible drought or attacks of mildew. Market fields are at the most ploughed only from 10 inches to 12 inches deep, and late Peas cannot withstand drought in such cases as those in gardens can. As late Peas, none excel Antocrat, Late Queen, and Latest of All.—A. D.

**Potato Up-to-Date.**—A good deal of interest is felt in the ultimate turn-out of this late strong-growing Scotch-raised Potato. It is one of Mr. Finlay's, who gave us The Bruce and some others, and undoubtedly has the Magnum Bonum blood in it. The Bruce is almost a reproduction of Magnum Bonum, indeed in top and tubers is scarcely distinct. However, it is not the only one put into commerce that shows the Magnum parentage. Up-to-Date has some diverse features, although it still has the strong tall top growth with which the Magnum race has made us familiar. The tubers should be more pebble-shaped and more even in size; indeed, the comparative evenness of the tubers so far seems to have been one of its special recommendations. I have it growing on one brash at Surbiton, beside Syon House Prolific, Chancellor, The Bruce and numerous fine varieties, but at present there is no prospect of the tubers being ready to lift earlier than the second week in September.—A. D.

**Spinach.**—Will a "Midland Grower," who refers to a Spinach named The Carter at page 119, kindly say in what respect this variety differs from others in commerce? There was a first-rate and most complete trial of all the divers Spinach in commerce conducted at Chiswick two years since, and the result was to define but three really distinct varieties only, each one having both round and prickly seed. The Flanders, which is the old commerce variety, is generally grown as summer (Round-seeded) and winter (Prickly-seeded), though differing only in young seed. The second is the large-leaved Viroflay, or, as also called, Victoria, now well known in commerce, and one of the largest leaved and finest of the various Spinach. The third is the Long-stander, a very distinct form, the leaves being stout, very green, rather rounded, and the plants less apt to bolt off to flower than either of the others. Now, does The Carter differ from either of these? If so, then let us see it growing at Chiswick, that its merits may be widely known. Anything new and distinct is ever welcomed, if it be also good; but praising old things under new names is rather trying.—A. D.

**Pea Autocrat.**—In a season when many vegetables have failed it is well to note the merits of any good variety. Autocrat has been most useful, as the crop was a full one, and though our soil is very light, the quality was excellent. For some years I have grown the above, and I have advised others to do so in these pages, and the longer I grow it the more useful I find it, my only objection to it in the past being its price. Now, Autocrat is within everyone's reach, and a grand mid-season or late variety it is. It is not unlike Ne Plus Ultra in colour, with the same good qualities. It is of a robust growth, which enables it to resist drought and mildew. It should be sown thinly to get good results, and then there is a grand crop. I use it for July and August supplies, and though the latter sowings have turned in earlier than needed, owing to the heat and drought, there is no lack of pods and of the best variety. "W. S." (p. 118) notes that Autocrat has done well with him.—G. WYTHES.

**The yellow Turnip.**—In few gardens are Turnips sent to the kitchen of good quality, say from January to May. This is owing to many of our white-fleshed varieties getting too coarse in rich garden soil and not standing the winter well. In the northern parts of the country there is less difficulty, as the yellow-fleshed varieties are in constant demand all the year round. If

anyone interested in the market supply in our large northern towns attempted to grow white varieties he would have a poor sale. The yellow-fleshed kinds are more solid, and I consider them superior in quality to many of our white kinds. Doubtless, for early spring sowing the white varieties are superior, being earlier; but for succession crops and for winter supplies the yellow-fleshed are more useful, as they remain solid longer. One yellow variety I grew last season stood drought splendidly. I had it under the name of Green Top Yellow Scotch, and although the white varieties soon got hot and tough, this variety, with a longer tap-root, was excellent and did not run. I am aware climate in a measure is answerable for the excellent qualities of the yellow varieties, and I may add soil also. There is no lack of really good yellow varieties; the Orange Jelly, Yellow Perfection, Yellow Malta and Dobbie's Golden Ball—the last a splendid type for present sowing—are all good and worth a trial where winter Turnips are required in quantity. Even in warm soils for storing, or a winter crop to remain where sown, the yellow varieties are less injured by wet or frost. A sowing made now and another a month hence will give roots from October to March, or later. Huge roots are not needed, but medium-sized, or even small for the latest supply. Where Turnips are stored, it is much better to place in the open, with just enough covering to keep out frost, as when placed in a warm store they grow out and soon become flavourless. When sown in autumn the seeds soon germinate in moist soil. For keeping till spring I advise a later sowing.—G. W. S.

**Feeding Asparagus.**—Many take care to supply a liberal quantity of artificial manure, salt, and so on to their Asparagus beds in the spring months, while growth is small and new roots are comparatively few in number, but entirely neglect them after the grass gets a fair height during August. But this is just the time when the roots can assimilate plenty of food, there being an abundance of roots working near the surface. It can, with a little care and trouble, be spread broadcast over the surface of the beds in spite of the abundance of top growth, and if a little salt is mixed with the manure it will destroy any young seedling weeds that may spring up after the rains, for nothing looks worse than an accumulation of weeds and rubbish when the beds are mown over in autumn, to say nothing of the impoverishment by such things.—J. C.

## ONIONS.

A COTTAGER who hardly ever fails to secure good crops of Onions was this year rather puzzled as to the cause of some of the plants going off when about one-fourth grown. The disease, as he termed it, appeared for the first time last year. On pulling up some of the affected bulbs I found that the roots were nearly all decayed, but an examination with the pocket lens failed to reveal any signs of disease or insect pests; the roots seemed simply to have withered away. I found that, contrary to his usual practice, this man had not roughly dug his ground in winter, but had waited until spring, had then dug it in the usual manner, sowing the seeds right away. In this way the soil had not been exposed to the sweetening influences of frost and wind, and, although naturally light, was too close and sour for the roots to work freely in. It is well to ridge up ground intended for Onions early in the winter, so that every particle of the top spit is subjected to atmospheric influences in the winter season, as Onion seed should where the maggot is troublesome be sown in February. The cottager above referred to sows, if possible, early in the month, and I have not in twenty years seen a bad crop of Onions in that garden, although the locality is much infested with the grub. It would seem that, with the soil in a very sweet condition at sowing time and an early start, the young plants get too large for the grub to injure much. If the soil is al-

lowed to remain untouched through the early winter months, unless February is remarkably fine, there is no chance of thoroughly sweetening it before March, and after a wet winter it is frequently the end of that month before it is really in a fit condition for the reception of seeds. If the roots cannot work freely in the soil from that time they appear above ground, they are liable to come into a stunted condition in a time of heat and drought later on. When the plants get checked in this way they are almost certain to fall a prey to the maggot in districts where this prevails. J. C. B.

**Potato Sharpe's Victor.**—My seed Potatoes are always well greened. At lifting time they are laid out on an asphalt walk for a week or fortnight if favourable. Then they are put into shallow boxes, stood in an open shed, and kept as cool and given much light as possible until planting time. I plant Sharpe's Victor as early in February as I can. As soon as the tops are through the ground I stick Pea-rod in slanting direction amongst them, and it is very seldom frost does them any harm.—T. COCKERILL.

**Feeding Seakale.**—Those who force Seakale and rely upon home-grown roots will find the much finer crowns are obtained by feeding free at this season. I find that after prolonged heat and drought, with the rainfall there is such liberal growth. Food given now is of great value in swelling up the crowns and furnishing full-sized crowns for forcing. Sewage in a diluted form an excellent food. Failing this, liquid manure from stables is a grand fertiliser, as this latter contains saline matter which is good for plants. Nitrate used now is specially good and as a top-dressing at the rate of 3 cwt. per acre is one of the best and quickest acting food we have. Nitrate of soda is of special value in poor soils, used before growth is too far advanced and if used in wet or showery weather its effect is soon seen. Fish manure is a valuable food when moisture can be given to wash the food into the soil. This manure mixed with nitrates or sulphate of potash is one of the best fertilisers, but given alone is of great value applied at the rate of 5 cwt. per acre. Seakale often suffers in dry seasons, and unless moisture is given freely growth is checked, and for plants grown for open air supplies food given now is of great value in building strong crowns.—S. M.

**Planting winter and spring vegetables.** Gardeners and others are often perplexed as to the best course to pursue with their young Colewort and Cabbage plants in hot, dry autumn being afraid to transplant on account of the extreme drought. In such seasons the great advantage of sowing thinly and thinning out the seedlings freely when quite small is seen, as even left until slightly larger than ordinary planting out size they take little harm; whereas when crowded together they must go out or be spoiled. Much may be done to help on the young plant after removal by a little timely preparation, such for instance, as drawing out good deep drills 10 days previous to planting and filling them with water several times. If the ground is fairly deep and in good heart this will usually suffice, but where the reverse is the case the plan adopted by some with their Broccoli, Brussels Sprouts, and Kales of making a thick paste of clay and water and dipping the roots in previous to planting may be practised even in August and September. A good deal of trouble in transplanting such things as Lettuces which are intended for cutting in early winter in the open border is saved by sowing where they are to remain, and merely thinning out to the required distances. In large gardens where extensive large quantities are required this plan, of course, would not answer, but in gardens of limited size the case is different. I find Coleworts sown on north border are doing far better in every way than those occupying a west or even an east aspect, and the plants will doubtless lift much better. Of course, wherever practicable it is always advisable to plant immediately after rain.—J. C.

## FLOWER GARDEN.

## THE CULTURE OF CALOCHORTI.

CALOCHORTI are natives of a vast region in North America, stretching from far east of the Rocky Mountains to the Pacific Ocean, and from Northern Mexico to British America. From the sea-coast and islands they grow from

*debris* are respectively the chosen homes of certain species. Several choose the blackest and stickiest of clays. One is found in salt meadows and many in grassy meadows. In

## THE CULTIVATION

of the species, it is only to be expected that experience will vary much. I have at different times tried nearly every known species in many

Wallace, in his notes on their culture, has properly outlined the best treatment in this respect. My experience more and more emphasizes the fact that no success with them need be expected unless drainage is good. More failures can be attributed to faulty drainage than to anything else. In the growth of Calochorti I commenced with the idea that the nearer I imitated the natural soil the better. The latter idea is a mistake. I have tried many soils. Their home is in a mountainous region where a great variety of soils is obtainable. I have gradually come to the use of three mixtures. Along our river banks there is a winter deposit of sandy silt. This is excellent Calochortus soil, but not so good as the next. I find the best results follow from the use of about one half half-rotten spent tan bark with one half sandy or clay loam. The tan bark rots slowly and gives a loose, well-drained soil, which will not pack. This suits all Calochorti and gives a splendid bloom and firm, well-ripened bulbs. For English growers many substitutes will occur. I know of but one disease to which Calochorti are subject. This is a mildew, the "Lily leaf ash." It attacks them in the spring, just before the flowering stalk appears. It attacks the leaf tissue, and in a week entirely destroys the leaf and injures the bulb. In their susceptibility to the attacks of the fungus Calochorti vary greatly. All of the species having a single glossy radical leaf, such as the *C. albus*, *C. elegans*, *C. nitidus*, and *C. Weedi* possess, are entirely free from its attacks excepting that *C. Weedi* is rarely touched. This includes all of the Star Tulips and the *C. nitidus* group. Of the Mariposa group proper, *C. luteus*, *C. Vesta*, *C. venustus* var. *purpurascens* and *C. venustus* var. *citrinus* are exempt, *C. luteus* var. *aculeatus* and the *Eldorado C. venustus* are nearly so, with *C. clavatus*, while all of the desert species, such as *C. splendens*, *C. Kennedyi*, *C. Palmeri*, *C. Gunnisoni*, *C. Nuttalli*, *C. macrocarpus*, and *C. flexuosus* are subject to it, some as *C. Kennedyi* to such an extent as to make their successful culture very near hopeless unless some cure can be found for this mildew.

I have planted hundreds of good *C. Kennedyi* bulbs, have had them come up and make a splendid leaf and root growth through the winter and early spring, and yet have never flowered one. I notice that there is a great difference in the degree to which lots of Calochorti from different localities are affected by this mildew. I believe that there is reason to hope that strains of each variety may be discovered which to a large extent will not suffer from it. Thus the beautiful *Calochortus venustus* var. *roseus* is very much injured by it, while the very similar *Eldorado venustus* is but little troubled, and *C. Vesta* not in the least.

While the amateur may prefer to try all sorts and get his experience for himself, I believe that the ordinary grower will appreciate a list of the

## BEST GROWERS

among the Calochorti, as well as a collection representing all sections of the genus. For such I would recommend the following:—

In the globular-flowered Star Tulips, *C. albus*, white, *C. pulchellus*, yellow, and *C. amoenus*, rose-coloured, are all thrifty and beautiful. Among the open-cupped Star Tulips, *C. Benthami*, in yellow, and *C. Maweanus* var. *major* are the best. There is, however, a race of giant Star Tulips, sturdy plants 9 inches to 16 inches high, with large flowers of the same delicate style as *Maweanus*, which, although rare now, will soon quite displace the smaller



Flowers of the rarer Mariposa Lilies.

9000 feet to 9000 feet altitude on the peaks. Some are natives of the intensely hot deserts of Southern California and Arizona, and some grow in the moist meadows of Oregon in a climate differing but little from that of England. Montana and other states of the inland region the species indigenous there have to bear a low temperature as 40° below zero. In the soils in which they naturally grow there is as much diversity. Clay, sand, loam and rocky

soils and situations. The winter climate of Ukiah is quite wet, with the thermometer often at 20° to 24°, and sometimes as low as 15° above zero. Often the Calochorti leaves are frozen till they crackle, but I have never known any injury to result. In spring there is abundant rain until their flowering time. Our mid-summer is perfectly dry. Perfect drainage is the first essential to success. A well-drained soil is best for all sorts. Mr.

ones. These are *C. apiculatus*, straw-coloured, *C. Greenei*, blue, and *C. Howelli*, yellow. *C. lilacinus*, a lavender-coloured sort, is a splendid grower and very desirable. In the next section, *C. nitidus* is a fine hardy and very beautiful plant, combining the attributes of Star Tulip and Mariposa. In the *C. Weedi* set, *C. Plummerae* is best. Nearly all of the *C. splendens* group are subject to mildew; *C. splendens* var. *atroviolaceus* seems the hardiest. Of the *C. venustus*, the true Butterfly Tulips, *C. Vesta* is by far the best grower. It is a sort which has great vitality, can be propagated very rapidly by offsets (three or four a year), and grows well in any well-drained soil. I saw a fine instance of its comparative vigour in the garden of Mr. Luther Burbank, of Santa Rosa, California. A set of about a dozen species had been planted in a bed of rich soil, with summer watering, two years ago. Of the set, one *C. Plummerae*, and two *C. venustus oculatus* survived, but the row of *C. Vesta* had quadrupled and showed a solid mass of immense blooms. *C. venustus* var. *purpurascens* is almost as good a grower, and the two are by all odds the easiest *Calochorti* to grow. *C. venustus* var. *citrinus* in lemon is very thrifty, rather more so than *C. venustus oculatus* in white, or the Eldorado strain in all colours. *C. Lyoni*, *C. splendens*, *C. Palmeri*, *C. Gunnisoni*, and *C. Nuttalli* are all subject to the mildew. That grand plant *C. clavatus* is a fine grower and much thrifter than the foregoing. *C. aureus*, *C. Kennedyi*, *C. flexuosus*, and *C. Nuttalli* are apt to give little satisfaction, beautiful as they are. *C. macrocarpus* is in the same list. *C. luteus* var. *concolor* is rather better, although not so good as *clavatus*. *C. luteus* is a very thrifty little plant, but not to be mentioned with *C. venustus* var. *citrinus*.

I have found that by very late planting I can bring sorts to flower which planted early invariably succumb. I planted such species as *C. Nuttalli*, *C. Lyoni*, *C. splendens*, and *C. venustus roseus* in February this season and had a magnificent bloom. I had the same experience a year ago. It would seem that when planted early they reach a standstill period in late winter and cannot resist disease, while planted late they are, in full growth at the critical period.

CARL PURDY.

Ukiah, California, U.S.A.

**Gypsophila paniculata.**—A very nice point was raised at the recent exhibition of the Midland Carnation Society at Birmingham. There was a class for floral arrangements or designs for a dinner-table. Ferns or any other foliage may be used, but Carnation and Picotee blooms only allowed. There were seven of these tables, and in most of them *Gypsophila paniculata* was employed. The question raised is a very nice one: Was it in accordance with the schedule that *Gypsophila paniculata* be used, seeing that the schedule distinctly states "Carnation and Picotee blooms only?" The matter came before me as the superintendent of the show, and I held that the *Gypsophila* was employed solely as a light and graceful-foliaged plant; that from the floral point of view it had no value whatever; and as its use had been permitted in the past, I should allow it on that occasion. This view was held by Mr. Robert Sydenham, and there was no disqualification. At the same time I am free to admit that the *Gypsophila* is a flowering plant, that it is shown as such in a collection of bunches of perennials, and that it would be well if its use were made permissive in the future in order to prevent any objection being raised to its employment.—R. DEAN.

**Improvement in Cactus Dahlias.**—The taste for Dahlias other than the lumpy masses of colour of the old show varieties, as they are called, has led to the production of the more useful and

beautiful Cactus-shaped kinds. The transformation has been rapid when one thinks of the sorts so popular even a few years back. But a season or two ago it was thought that in *Gloriosa*, *Matchless*, and the like a standard of excellence had been reached which could not possibly be improved upon. Who, however, that has the means of comparison would now consider these the best types? The former looks heavy beside a variety called *Starfish*, and the latter the same compared with the newer *Harry Stredwick*. The grace and lightness of formation lately gained are decided advances, and when new shades of colour are obtained with this desirable form, then indeed there will be a race of lovely Dahlias. It is pleasing to note size has not been the leading point. To my mind, if a Cactus Dahlia measures much over 4 inches in diameter it becomes heavy. Another noticeable trait in the newer kinds is the habit of throwing their blossoms out on long wiry stems. Shortness of the flower-stem detracts from the merits of many otherwise beautiful sorts—*Delicata*, *Lady Penzance*, *Countess of Radnor*, for example. The growth of the plants in the later sorts is an advance in its healthy, bushy character. We require more freedom of flowering in some instances, or rather every flower should come double. This is not the case yet with too many varieties which exhibit an eye or disc in the centre if not severely disbudded. *Earl of Pembroke* is a perfect type in the matter of free flowering.—H. S.

**Carnation Carolus Duran.**—In his *Carnation notes* from Woking, "H. S." (p. 125) mentions having been much disappointed with the above Carnation, which he, presumably, met with for the first time in the collection under notice. Evidently there was something radically wrong with the plants in question, for, whatever may be its faults, *Carolus Duran* is one of the healthiest growers and best formed flowers among apricot-coloured Carnations. Its shade of colour is not so striking as that of *Mrs. Reynolds-Hole*, but for all that it is distinctly pleasing. In season it is later than the majority of summer Carnations, and only comes on as the others are getting over; indeed, it is with me now (August 18) at its best, and will go on flowering for weeks to come. In habit it resembles the more moderate growers among the Tree Carnations, as it grows about 2½ feet high and flowers all up the sides of the main stems. The flowers are very full, and a burst calyx is very rarely met with on a healthy plant, except when it has been very severely disbudded, which it resents. I would not have troubled you with this defence of an old favourite had I not so often praised it in your pages. I must say, however, that I think "H. S." has based his objections on very slight knowledge of the variety, and that it is not quite fair to condemn a valuable border Carnation on the strength of a failure to bring out its best points under pot cultivation. Let "H. S." grow it in big groups in the border where he can cut it by the armful at a time with stems a foot or more in length, and I feel sure that he will then neither condemn its growth, form, nor colour. This seems to me the only true way to judge the qualities of a border Carnation.—J. C. TALLACK.

**Mosaic culture in the Fatherland.**—The Germans are good planters, and their town gardens are very gracefully arranged, but when they come to the phase of bedding out called mosaic culture the effect is appalling in its ugliness and stupidity. This *bonne bouche* is reserved for the very best positions in often charming cities and well-planted parks, and is put down in front of the finest buildings, and as a centre-piece of the garden art in the parks at fashionable "baths" like Homburg and Wiesbaden. It is never pretty in colour as a whole as seen at mid-summer, the plants mostly being of a sickly purple or other ugly colour, and any form and freedom of growth the plants might naturally show are cut down, as in our own case, by the scissors and fingers. A flower gardener who is ambitious of competing in design with the poorest kind of carpet-makers may find many designs as hard and mechanical as could be

imagined, but dissociated wholly from true art. To those who think this a matter of taste, we say no; the error of it should be a matter of common sense. These designs are wrong, ugly, and oft ridiculous, because the designer thinks of pattern and not of form and beauty, and forgets he is dealing with living things. The garden is degraded when we resort to conventional complexities, which are right enough on flat surface like panels, carpets, and pavement. The people who produce these—among the best of which the *cloisonné* work of the Japanese—could do nothing better with such surface, but the gardener deals with living things, often more beautiful in their natural forms than anything made by man. The only result got by putting plants in such mosaic is masses of colour, which could be better got by grouping and massing in natural ways.—Field.

#### CARNATIONS AT BOOKHAM.

THE collection of choice border Carnations in the Edenside Nursery of Mr. James Douglas, at Gre Bookham, is perhaps the most complete of the kind. A year ago Mr. Douglas had some three long houses devoted to his favourite flower. These in the short space of twelve months we found inadequate for the accommodation of forthcoming novelties, and a new house about 100 feet in length and 18 feet wide has been built during the present summer expressly for the novelties all sections. The novelties alone are a wonderful lot, the spacious house being filled from end to end, each kind arranged in one huge block. We cannot fail to strike one on seeing this remarkable set of novelties the size of blossom, with vigour and robust constitution, that prevails. Especially is this so in the yellow ground and fancy kind which are increasing in favour every year. Indeed, it would be difficult to conceive anything more handsome in its way than *Voltaire*, raised by Mr. Martin Smith and distributed a year ago. A similarly high standard prevails throughout.

In the yellow grounds there are several novelties for this year, all of great merit. *Badmint* is particularly good, handsome in form and size of blossom, the petals well formed and of a clear yellow, with a deep red margin. *Empress Eugénie* is considered one of the very best of its kind, and is a most distinct flower with rose edge. *Dervi* has a primrose ground and a margin of lilac-roses this is one of the largest flowers. *Miss Ali Mills*, raised by Dr. Colby Sharpin, is an exceptional flower, most beautiful in form, deep yellow, and margined with rich scarlet. Another kind, *Stanley Wrightson* (Douglas), has large massive flowers and heavy scarlet edge, which among the general collection, *Ladas*, Mr. Nigg is perhaps the most remarkable of all; *Mrs. Douglas* a beautifully refined flower; *Xerxes*, *Voltaire* already noted; *Golden Eagle*, a fine deep colour ground; and *Eldorado* were conspicuous.

Sells are a more numerous class as also a strong and important one, and generally in demand. Among these we noted some especially good scarlets, foremost among them being *Lady Hindley*, a brilliant and striking flower of the richest scarlet with petals of exceptional form and substance. *Lamplighter* is another very fine bright scarlet clear and good, while *Mrs. McRae* is of dark hue and said to be an improvement upon *Haye* scarlet in colour. *Belladonna* and *Boadicea* are both high-coloured flowers, the latter especially vigorous. *Garrick* is quite distinct, a rich ruby red, while the form is all one could desire. No is certainly the darkest yet raised, in colour an exceptionally dark maroon-crimson, while the flower in form is well nigh faultless. In the pin and salmon-pink shades there are some special good things, at the head of which we must place *Endymion*, a really magnificent Carnation, exquisite both in form and colour, and of a lovely salmon-pink shade. *May Yobe* is very pleasing in a shade of reddish-pink, the flowers sweetly fragrant and very handsome in form, while the growth is strong and vigorous withal. Scarcely an Carnation can surpass *Regatta*, more particular-

its perfectly neat form, while the rose-pink of its wipers renders it in this respect most pleasing, and Minerva, a clear deep pink well, up to exhibition standard so far as its full flowers and fine wipers are concerned, completed the most worthy of this ever-important shade of colour. In the shades of flesh, Ibis and Cassandra—which also a late flowering variety, and for this reason both including in every selection—are conspicuous. Equally so is the lovely Lady Nina

and I have not been at all successful with it. I was in a neighbour's garden the other day when I saw a plant of it with a whole sheaf of flowers open. No particular pains had been taken with its culture, and I can only imagine when it is now so constantly raised from seed that the seedlings vary in this quality of free flowering, and that my friend had got one of the best of them. I have tried with my own plants the various plans which have been suggested in THE GARDEN for inducing it to flower freely, but in vain. As is usual in most directions about culture, you get the most varied recommendations, and I can only conjecture that soil and situation have induced growers to make these recommendations. One says, do not disturb the plants at all, while another says, pull the plants to pieces. Both plans have been equally ineffectual with me.—D.

**Iceland Poppies.**—At page 127 "R. D." has a note on these showy and useful flowers, recommending them for table decoration. When gracefully and lightfully arranged with Gypsophila or some light grasses, few things can surpass them on the dinner table or in vases. The white and yellow or orange blend well, or they have a charming effect arranged separately, lasting fairly well when cut and placed in water at once. They are not amongst the best things for sending to a distance, not travelling well unless special care is taken in packing. A little care is needed in raising the plants, a shaded position and specially prepared bed being best, sowing in May or June and transplanting in early autumn for next summer's flowering. They are capital subjects for mixing in the herbaceous border.—J. C.

NOTES ON LILIES.

THERE is one family of plants which persistently asserts itself at this season of the year, viz., the Lilies. Here, for instance, is a grand spike of that most valuable acquisition *Lilium Henryi*, the stem from 6 feet to 7 feet high, crowded with a cluster of brilliant orange-coloured flowers copiously spotted with dark chocolate-brown. This, which is in truth both in structure and form an orange-coloured speciosum, is likely to become one of our most popular Lilies; it has a grand constitution and is perfectly hardy. Some of the Lilies are, of course, past, but many of them have done exceptionally well, as, for example, *Lilium candidum*, and yet we are hearing continual complaints of its failure. I had a visit the other day from my neighbour, the poet laureate. He somewhat envied the condition of my bulbs, and said that he had lost all of his; yet, midway between him and me there are some cottagers' gardens on the brow of the hill, facing due south, with a hot, sandy soil, and there the plants are more vigorous than my own, the stems being between 4 feet and 5 feet high and crowned with a profusion of large, well-formed flowers, so that, considering what a dry season we have had and the position of these bulbs, I cannot resist the conclusion that we cannot grow them in too dry and warm a situation. These plants receive no sort of care, are never watered, and yet, as I have said, they are full of life and vigour. There is another white Lily about whose hardiness I am not quite sure, although some growers assert that it is perfectly hardy. I mean *Lilium philippinense*. In form I think it is one of the most elegant of the longiflorum type of Lilies, the tube being nearly a foot long and very elegantly shaped. Its habitat would at first sight seem to throw a doubt on its hardiness, but, although found in the Philippine Islands, it grows at an elevation of 8000 feet, and so may probably be like some of the plants found in East Africa, perfectly hardy; it is very dwarf, and, if hardy, will do admirably for the front of any bed. There is

another well-known Lily which has been exceptionally good this year, viz., *Lilium crustaceum*, or as the older generations always called it, *Isabellinum*, a name which seemed to indicate its hybrid origin. It is very easily grown, and I am often surprised that a plant at once so stately and so beautiful is not more widely used; its apricot-coloured flowers are very attractive. *Lilium Leichtlini* has flowered very well with me this year, and is certainly a very pleasing flower, but it does not seem to have a very strong constitution; I have frequently lost it, but this year it seems to have done very well indeed. *Lilium superbum*, or the Swamp Lily, as it is sometimes called, has had a hard time of it in this dry weather; my plants are alive and flowering well, although those who have been accustomed to see it 6 feet or 8 feet high will hardly recognise it in my dwarf plants.

A CHARMING EFFECT.

*RHEXIA VIRGINICA* and the distinct *Muhlenbeckia complexa* are now both at their best out of doors. The above heading was suggested by an accidental mixture of a wild sort. Nothing, as it struck me at first—and I have been many a time to look at the beautiful blend—could be more charming. The *Muhlenbeckia* is well known as having a resemblance to a climbing or sprawling mass of Maiden-hair Fern with black stems and fawny green foliage. If there is anything by which it can climb as a twiner it climbs, otherwise it runs rapidly on the surface and becomes a capital foil for any sort of short, late summer-flowering plant or bulb, especially the *Colchicums*. In the present case the *Rhexia* had been placed near some strong plants which had covered the ground, and now the *Rhexia* has come through and at a stature of 9 inches is mingling its clusters of big rosy carmine flowers with the more sombre hue of the creeper. But the brightest of touch of colour is given by the curly filaments of



*Calochortus fuscus.* (See p. 157.)



*Calochortus flavus.* (See p. 157.)

the sheeny flowers of the *Rhexia*; they are of the brilliant golden yellow that almost seems to turn twilight to sunlight. I try to be a contented man, but I wish I had the space and other means to make up a big group of these plants to light up the garden in the latter half of August, when, as we well know, there is a great want of brightness.

The *Muhlenbeckia* will grow almost anywhere, but a sheltered nook is advisable, as the severest

blush or pale peach shade, and a flower of considerable merit, though not a novelty of the present year; indeed, it is freely grown in northern districts, and that deservedly. In the somewhat rare shade of cinnamon there are but few, therefore Mrs. Colby Sharpin is doubly welcome for its exquisite rich shade of this colour all for its superb form. This variety has obtained the highest possible honours as a show flower, and makes a conspicuous object even among the host of meritorious things at Bookham. Another conspicuous novelty is that named Mrs. James Douglas, which Mr. Douglas regards as the best Carnation he has yet raised." The colour is rich carmine-rose, the flowers large and of perfect form; indeed, as we recently saw it, the flowers were handsome in the extreme. Pure white kinds are not numerous in this collection this year, and Mr. Martin Smith's new Silver Standard may be taken as the best of these.

The above is far from a complete list, even of the novelties to be seen at Edenside, for some kinds, as yet in insufficient numbers for distribution, are necessarily omitted here. Adjoining the house of new varieties is another of equal size, and equally meritorious for the rich collection it contains. Here, again, the fancy kinds, and also the yellow ground varieties, were in strong force, which, with the selfs—mostly the novelties of a year ago—make a most sumptuous feast of the Carnation. In the open nursery a large space is devoted to seedlings, many very fine, while those that even bear a mark for further trial are very few and far between. E. J.

**Teuchera sanguinea.**—We are continually being complained of this not being free flowering,

winters have been known to kill it. The *Rhexia* has special requirements. The bed should be sunken so as to get plenty of moisture, the soil well decayed peat or leaves, and, of course, as it further decays and settles, should be replenished with fresh mulchings. This plan will very well suit the tubers of the *Rhexia*, as the younger ones often come near the surface than would otherwise be good for them in keen frosts. To grow these two plants together as indicated, the creeper, of course, would get the same sort of black soil, and this would do well, because the foliage would be all the more luxuriant, as it should be, for showing off flowers of such high colour as those of the *Rhexia*. J. Wood.

*Woodville, Kirkstall.*

#### SHORT NOTES.—FLOWER.

**Cactus Dahlia Princess Ena** is one of the newest varieties. The colour is a striking shade of amber, the blooms of medium size, full and nicely formed, the petals narrow and pointed, and the habit of the plant dwarf. It is, in fact, one of the shortest in my collection.—H. S.

**Cactus Dahlia Mrs. Frances Fell.**—I am not at all pleased with this variety, although much has been said of its merits. It is supposed to be white, but the blooms here are dirty in colour and very heavy in build. The Cactus form, too, is absent, and the long ungainly flower-stems do not add to the beauty of the plant.—H.

**Cactus Dahlia Charles Woodbridge.**—This variety was introduced last year, but I only saw one flower of it at the Dahlia show. It is unquestionably the best of its colour, and indeed one of the most perfect sorts yet raised. Its colour is crimson, with a purple glow. This is most vivid and rich. It is dwarf in growth and has particularly fine foliage.—S.

**Cactus Dahlia Bridesmaid.**—This is a decided improvement, being a distinct and most delicately tinted kind. It has a primrose-yellow ground, tinged with rose, and in form the blooms are perfect. The plant is sturdy, throwing the flowers up on long stems, unlike the older variety of somewhat similar tints, *Delicata*. A Dahlia bloom which is hidden amongst leaves, however pretty itself, is useless either for cutting or as a showy object in the garden.—H.

**Cactus Dahlia Fusilier** is about the best of last season's novelties, and it is one of the earliest to bloom this year. The shape and colour (coral-pink) are beautiful. I find the buds require thinning, the plant producing more than can develop perfectly. Its blossoms are thrown well away from the leaves.—H.

**Pompon Dahlia Zoar.**—This is a charming little flower, perfect in shape and delicate in combination of lemon and pink. Apart from its blossoms which come most abundantly is the dwarf habit of the plant. It does not reach 2 feet in height. Anyone desiring a bold and pretty group will do well to make a note of this little-known variety.

**Cactus Dahlia Harry Stredwick.**—This is a very dark crimson-coloured variety of much merit. In form it may be classed among the best types. The blooms are produced on long foot-stalks; therefore they are not hidden by the leaves—a fault of not a few otherwise beautiful kinds. The plant is of medium height and has stout foliage.—H.

**Cactus Dahlia Starfish** is a fine new variety. The blooms have the narrow pointed and twisted petals so much admired in this class. The colour is a vivid scarlet. Its flowers are full and borne very freely, whilst the habit of growth is all that can be desired. The raiser describes it as being the most perfect of Cactus Dahlias, and I think it well deserves this recommendation.—H.

**Cactus Dahlia Matchless.**—Few Dahlias are more admired than this almost black variety. One of its chief merits is the abundance of blooms each plant gives. My plants are literally covered with flowers and they form striking objects. One can scarcely point out an improvement in a

Dahlia of this shade of colour, although time may bring a kind with less flat and heavy-looking petals.—H.

## ORCHARD AND FRUIT GARDEN.

### MILDEW ON VINES.

EIGHT Vines in my viney are badly covered with mildew and to a less extent with what I believe is rust. Early in July, or perhaps it was in June, there was a little mildew, and I gave the gardener sulphur. I was then away from home for several weeks, and on returning found leaves and bunches of Grapes all thickly covered with mildew. The gardener says it is too bad to be dealt with. The Vines are Black Hamburg, Alicante, and two white kinds. They have done well for twenty-five to thirty years. What is the cause, and what the remedy?—H. D. R.

\*\*\* Mildew is very bad in many vineries this season, but it is to be hoped there are few such cases as above described, or where it is thought the Vines are not worth restoring to a healthy condition. If the Vines owned by "H. D. R." are feeble and the young growth promises to ripen indifferently, then it might probably be the most economical in the end to root them out, and also to remove the whole of the border, a thorough cleansing of glass, woodwork (this should be painted), walls, including the foundations, being followed by the formation of a new border and the planting of young Vines. This would mean a considerable amount of work and expense, and entail the loss of a supply of Grapes for one season only. Vines from twenty-five to thirty years old need not necessarily be worn out, and if those under notice have formed moderately strong lateral growth and the wood promises to ripen satisfactorily, these might be restored to a healthier, profitable state next season, only a few traces of mildew being observable. In this case there would not be a loss of crop. If this is the line decided to be taken, an attempt should be made to check the progress of the mildew at once. Supposing the bunches now hanging are worthless, all ought to be cut and the Vines freely syringed with some mildew specific, diluted and applied as advised by the vendors, repeating the application a week or ten days later. It must be understood that if these mildew specifics touch sound bunches they will greatly disfigure them, and they should not, therefore, be recklessly used by other readers who may be troubled with mildew on their Vines. In all instances where mildew is on the Vines, but the bunches are worth saving, its progress may be arrested by sulphur fumes generated by means of the hot-water pipes. Paint the latter with a mixture of flowers of sulphur and skimmed milk, close the house after sunset, and make the pipes as hot as possible. The fumes ought to be almost unbearable to anyone going into the house, otherwise they will not be effective. If applied when there are no berries to crack, the house may be shut up in the daytime and the temperature raised to 130° for a short time with advantage.

Vines rooting into new soil are usually in the most profitable condition, and a fresh width of border would benefit "H. D. R.'s" Vines greatly. This part of the work of renovation ought to commence soon, or while yet there is time for the new soil to become partly occupied by roots before the leaves cease their functions. Fork away all the old border up to within a yard or so of the stems of the Vines, preserving the bulk of the roots unearthened and further

removing the surface of that portion of the border saved so as to bare the roots. It is not necessary to completely form a new border this autumn, but a width should be added to hold the old roots after they have been freely pruned and the rest added piecemeal in later years. A particular mixture is absolutely necessary, but fresh fibrous loam from an old pasture is very desirable, chopping this up roughly and adding a sprinkling of wood ashes, mortar rubbish, nearly fresh horse manure and half-inch bone. Failing turf, the border may be formed with a mixture of fresh loam and garden soil in equal parts, with enough mortar rubbish, "burnt bake" and horse manure to keep it porous; after years, the other essentials being supplied by some special Vine manures used at the rate advised by the vendors. The portion of the border should be top-dressed with a rich mixture of soil and manures of the character just described, and neither this nor the new soil containing old roots regularly distributed through it must be allowed to become dry for the next twelve months at least.

The improved root-action, which is certain to follow a change of soil, will aid the Vines ward off disease and insect attacks, and largely contribute to the production of greatly improved crops. At the same time it must not be wholly relied upon to keep mildew off. When the Vines are at rest and have been duly pruned the rods should be cleared of loose bark, and severely scraped, and following this with scrubbing with hot, soapy water prior to dressing with Gishurst compound applied according to instructions given on each box, and, failing this, flowers of sulphur may be freely rubbed with a soapy brush. A few disease germs may escape all this painting, white-washing, scrubbing and change of soil, and if the first time patches of mildew that show on the leaves are overlooked they will quickly spread all over the Vines again. A close look-out must therefore be kept in the spring, and any small patch found be at once either coated with fresh flowers of sulphur or be damped with diluted mildew specific applied with a sponge. A rush of cool air admitted through front ventilators on a bright day in the spring is liable to introduce mildew, while a sluggish moist atmosphere is most conducive to its further spread.—W. I.

### NEW STRAWBERRIES.

THERE is a long list of names at p. 127 of which may be termed new varieties, and even then will so long a list such kinds as Laxton's Leader, one of the best, I consider, and superior to Monarc is omitted; also the newer Mentmore, a Strawberry we shall hear more of. My object in adding "D. T. F.'s" note is to give those a place he overlooked, and I think he will pardon my remark if I do not set the same value on some that he does. I have this year grown Leader in good number and it is a very fine strawberry, well worth a place in all selections for its crop and size. I am aware in giving size as a recommendation I am on dangerous ground, but I have yet to learn why a good-sized fruit, if it is of good quality, should be condemned. I have never seen large fruits objected to. It is all very well to condemn size if quality is lacking; but I look upon large Strawberries as a great boon to growers who need Strawberries in quantity, and I have never heard any objection to a fine dish. "D. T. F." I am pleased to see, gives Laxton's Royal Sovereign a place among the new kinds. It is well deserving of this on account of its forcing and open qualities. It will grow where others fail. I show my opinion of its worth this year, and have added another thousand to my stock for forcing, as it is equally early as the Vicomtesse H. de Thury, and there is size with a heavy crop. Mentmore is a new variety of this year

and was given an award early in June. This is a valuable fruit, following Royal Sovereign. It is a deep crimson colour, handsome, and of good quality. The growth is robust, and it is a fine main-crop variety. This was raised by Messrs. Weston, who have others, new ones, which I doubtless have heard of in time. Mentmore's parents were Noble and British Queen, and they are well known, the one for free growth and size, the other for quality.

"D. T. F." names Mr. Allan's valuable seedlings and the newer Lady Suffield. I have not grown the last-named, but if equal to Lord Suffield will be valuable. Again, we have four from Mr. Carmichael, and here my remarks must be brief. I have only seen fruits once, and not at the same opportunity of seeing growing plants as "D. T. F." A great deal depends upon growth, as in some soils some varieties do not thrive. Veitch's Perfection has this season proved really grand fruit, and though not large there is quality. I trust it will be found a free grower what may be termed a bad Strawberry soil. I note it is not recommended for forcing, and this is important, as growers will not be disappointed. There are plenty which force. Another good point of Perfection is that it travels well. This, like most of the new seedlings, claims British Queen one of its parents. I have not noted the new evens' Wonder, a fruit sent out for forcing chiefly, and another of more recent introduction, Early Giant, a very large fruit. Some of "D. T. F.'s" names I have no knowledge of. It may be urged at this great increase in numbers will be bewildering. Soils vary so much that one season's trial must not condemn any new kind. I find in our light soil I must grow young plants, also must growers. Many are in a position to give a few varieties a trial, and these can give us the result of their work. The Royal Horticultural Society devote much time and space to trials, which are a great help to those who cannot grow a few things.

G. WYTHES.

#### TRANSPLANTING FRUIT TREES.

THE time is at hand when this work will have to be attended to. Large trees that have to be moved either from one house to another, or from the outside to new structures need care, if a season's crop is not to be lost. On no account should the tree be left until the leaves fall. It is much better to be too early than too late, but as soon as the foliage on the older wood is ripe no time must be lost. New borders should be made some few weeks in advance of lifting to give them time to settle. The soil must be firmly packed, and in most cases it is necessary to use a rammer, the soil being fairly dry and not likely to clog. I have known growers recommend outside borders being left until planting time, because they are likely to get soaked by autumn rains; but such a plan will not recommend itself to anyone who has observed the effect of loose borders, on young trees more especially. If properly firmed any ordinary rains will not harm them, and should a downpour occur it is easy to lay a few boards or old shutters over them to throw off the moisture. According to my experience in various soils and different counties, I find covering quite unnecessary. For borders close to hot, dry walls I find a greater depth of soil is required above the drainage than in any description of peach house, where the borders are usually wider and come in for more frequent watering. A depth of 2 feet would be ample in either case were water supplied in sufficient quantities as often as needed, but the less of spring and summer work often causes trees to be neglected outside, and in such cases an additional depth of 6 inches is advisable. The most suitable for Peaches has been often described in THE GARDEN, and all I need say is, be sure that plenty of lime is applied if this constituent is not present in the soil. Less complaint of the fruit dropping while stoning would be heard if this were always attended to. Burnt and charred garden refuse, too, are valuable

additions, but manure of any kind should be excluded. It is easy enough to feed the trees from the surfacing found to be necessary, this, too, having the effect of keeping the roots well up. After carefully lifting each tree, any long thong-like roots may be shortened back, making a clean cut sloping upward, but all small fibres must be carefully retained, and damaged as little as possible. Bruised or twisted roots must be cut back to where they are sound, and as much soil as possible kept about the ball. A good soaking of water before lifting is necessary should the soil be at all dry. Have a strong mat or large bag ready spread out upon a hand-barrow to take the tree, and pull this up afterwards, tying it around the stem to keep the ball of soil intact. Have the holes a foot larger every way than the size of the ball, and after spreading out the roots carefully with an upward slant, cover them with a little fine moderately dry soil before filling in, laying each tier out separately. The upper tiers ought not to be more than 2 inches under the surface, and when all is finished and firmly trodden in, give a thorough soaking of water to settle the soil round the small roots. If the weather is very hot and sunny, shading should be given both to trees outside and under glass, but the less this is used the better. Damp the trees overhead daily in dull weather, and twice daily if bright, this serving to keep the foliage fresh to the last, and ensuring plumpness of the wood. With regard to pruning either of young or old trees, no greater mistake is made in fruit growing than cutting hard back, always provided that the trees have been carefully lifted and planting not unduly delayed. All that is needed is to remove weak or badly ripened ends of shoots, and when the time for disbudding comes round in spring, if anything unsuitable to produce fruitful wood has been left, the shoots may be rubbed off and the faulty wood subsequently removed. When the shoots have finished up naturally with good triple buds at the end it is simply ruinous to cut them back. These few details carried out carefully, the lifting of larger trees may be safely attempted, and in most cases it may be done without loss of crops.

T.

#### MODERN GRAPE GROWING.

WITHOUT entering into the vexed question of elaborate *versus* simple, inexpensive Vine borders, this paper would yet be incomplete without some reference to that portion of my subject. And here, let me add, that what may be correct in the case of a private garden would, if attempted by a market grower, be altogether wrong, because uncalled for and far too expensive. When the bulk of Vine roots are to be found in a half dead state, deep down in a cold, water-logged soil, the value of the crops produced is very low indeed. In anticipation of this difficulty, it has long been the fashion to excavate deeply both for the foundation walls and for the borders, concrete floors, abundance of drainage, extra deep drains and the like following as a matter of course. Some of these precautions are not quite unnecessary, especially seeing that the Vines in private gardens are supposed to remain in a productive state for a long time, say from twenty-five to fifty years. My sympathy is with numerous gardeners who are not allowed to do what they think best with Vines in an unprofitable state. They must not think of rooting them out and starting afresh, nor can they produce enough fresh soil for the purpose of putting new life into the stale borders, which the Vine roots take every opportunity of escaping from. It is no fanciful compost that Vines require, but what they thrive in is good, sweet porous soil, the very opposite of half the borders in the country. The initial mistake made by so many of us has been this sinking the foundation of the

houses and borders so much below the ordinary ground level, thereby inviting the very evils we are most anxious to avoid. Market growers ought, however, not to take a great amount of credit to themselves for having avoided the errors of their brethren private gardeners. It was necessary, as previously intimated, that first drove them to avoid deep borders, excessive drainage and such things. If it had been absolutely necessary to form borders on the old lines comparatively few Grapes would have found their way to the markets other than the surplus from private gardens. Only those who have ever excavated for the deep foundations laid in correspondingly deep drains, and moved the mass of soil necessary before the site was ready for the new borders, have any conception of the amount of labour entailed and the cost of the whole work. Whether market growers are justified in rushing to the other extreme, and merely planting on the top of the ground that is to serve as a ready-made Vine border, may be questionable from a private gardener's point of view, but it answers surprisingly well all the same.

It is considered that ordinarily good land drainage, or that which is sufficient for hardy fruit trees, is good enough for Vines, any way, that is all many of them get, and they seem happy enough. Naturally, soils and sub-soils vary greatly, but no person with any experience would think of pitching upon a mass of heavy, clayey ground for growing Grapes extensively, unless prepared to go to some extra expense in fitting it for such work. From choice, I prefer either a sandy or gravelly, light, clayey loam, and would avoid as much as possible black spongy soils as well as tenacious clays. Some of the best Grapes I have yet grown were produced by Vines rooting in ground considered well adapted to the growth of cereals, especially Wheat, and noted for the grand crops of thistles that had been in possession from time immemorial. There was no extra draining done, nor a cartload of loam added. The preparation consisted of bastard trenching, good solid manure being added to each spit, and a dressing of burnbake and half-inch bones forked into the surface. This was neither more nor less than a good preparation for Tomatoes, and as a matter of fact the Vines had to share the border with Tomato plants for three successive seasons. It is true the latter were ostensibly in 10-inch pots, but the roots quickly found their way into the border underneath, and derived much of their support from it. To all appearances the Grape Vine does not suffer greatly from association with Tomato plants, and the latter are happy with the Vines so long as they are not unduly shaded.

The old notion that a Vine ought to be treated like a colt, or worked very lightly, if at all, during the first three or four years of its life, is quite exploded as far as market growers are concerned, though it is evident enough it dies hard in the case of private gardeners. There is no analogy between the two, and why they should be similarly treated passes my comprehension. If early cropping of Vines effectually stopped all further sound progress, then that would be a good reason for working them lightly for the first three or four years, but it does not necessarily do anything of the kind. Gardeners of my acquaintance have been so well pleased with the condition of their super-numeraries after they have produced two or more heavy crops, that they have actually preserved them and cut out what were intended to be permanent rods, but which had been unduly pampered and failed to crop satisfactorily accordingly.

There is more to be said on the subject of the treatment of young canes than can be crowded into one short article, and for the present I will not attempt it. The career of market-growers' Vines is supposed to be brief, but again I say not necessarily so. It is true they crop them sometimes lightly, but more often heavily during the first year after planting (I know where there are some that were planted in February, 1896, and which are now carrying six good bunches apiece, and others in the same house a year older with twelve bunches on each), but there is no good reason why these rods should not be as serviceable and as full of vigour twenty years hence as any very lightly cropped at the outset. It is all a question of management. If the heavily-cropped young rods form strong leaders and swell satisfactorily throughout, this to me is proof positive that they are not being badly used. In reality it is those Vines planted in rich borders, thought essential by some gardeners, that are the least equal to the strain of heavy cropping, and the first to require rest, renovation of border and other restorative measures. The market grower plants in comparatively poor soil, as compared with the great stacks of turves private gardeners are frequently enabled to plant in, and does not forget that good living must accompany hard work. Rich top-dressings, liquid manure and abundance of water are applied to their Vines, these serving to keep the roots active near the surface, and to sustain the Vines in excellent health in spite of the extraordinary crops they are expected to produce. When from various causes the Vines do fail to produce remunerative crops, no time is lost in trying to nurse them back to a more profitable condition, but they are rooted out and Tomatoes are grown in their place. In anticipation of this breakdown of the Vines, other houses are planted, and the work of keeping up a heavy, regular supply goes on. Enormous quantities of Grapes are put on our markets by foreign and home growers, but, thanks to the ever-increasing demand for them and the simple methods of culture now in vogue, they pay fairly well, even if the average price is 1s. per pound.

W. IGGULDEN.

#### RENEWING FRUIT TREE BORDERS.

THE time arrives, sooner or later, when the renewing of fruit tree borders becomes imperative, particularly in connection with fruit culture under glass, as, owing to the circumscribed area of such borders, together with the demands of the roots and the frequent necessity for applying large quantities of water, the soil, in course of time, becomes exhausted. When this should be done depends entirely on the condition of the soil comprising the borders, and this can only be ascertained by careful examination, commencing at the surface and sampling the same right down to the drainage. When a loam of good quality is used, in the construction of fruit tree borders, the necessity for renewal occurs at less frequent intervals, but when a loam of inferior quality only is to be had, the renewal of the borders every few years becomes an absolute necessity, that is if fruit of first-rate quality is looked for. Loam, as is well known, varies very much in character, some being full of fibre and some almost destitute of it, or containing such a small proportion that it soon becomes worn out and inert. Borders constructed of loam containing plenty of, or a fair proportion of, fibre will remain in good condition for many years, but when they are made up with loam of inferior quality the necessity arises for either

partially or entirely removing them at much more frequent intervals. Such cases as those just mentioned are by no means infrequent, and, however troublesome and inconvenient the matter may be, the inevitable has to be faced, for it is useless to expect good results once the soil becomes exhausted.

Now, the wearing out of the principal constituent of fruit tree borders shows itself in an unmistakable manner on the subjects growing in them, not all at once, it is true, but, generally speaking, in a gradual manner. The symptoms will, of course, vary according to the kind of fruit, and none will show it more quickly than the Vine and Peach. These symptoms when first noticed, whatever form or shape they may take, will at once convey to the mind of the cultivator the idea that all is not right, and the sharp practitioner will at once commence an investigation by examining the border, and according to the condition in which he finds the compost, so will he formulate his plans, whether the renewal has to be done wholly or in part, and make preparations accordingly.

The best time for carrying out this kind of work is undoubtedly in early autumn, but it is not always convenient to do it then, in many cases on account of not being able to get the crops cleared in time. However, when it can be done early and while the Vines or trees, as the case may be, still have leaves on them, it certainly is more advantageous from more points of view than one, as the fact of their still retaining their foliage leads to root action being set up at once, and by the time the leaves fall the new compost will contain numbers of new roots, which greatly accelerate their re-establishment. In any case such work should be done if possible before winter sets in, and incidental matters, comprising the haulage of the necessary materials, such as loam and old lime rubble, for correcting the former when heavy and retentive, wood ashes, charcoal, and drain pipes and rubble for the drainage, should be done in the meantime. In low-lying and damp districts where the sub-soil is apt at times to be charged with water, a flooring of concrete should be put in, if one does not already exist, to keep the superfluous moisture back, and the sand and lime should be ready for doing this with as soon as the old border has been removed. Where nothing but light or friable loam can be had, it is an excellent plan to add a little marl, clay or turf from the sides of roads, or even road scrapings to such for growing such subjects as Peaches and Nectarines, only they should be thoroughly dried and well pounded up before they are mixed with the loam. Wood ashes are easily made by charring refuse wood, such as the prunings of fruit trees and shrubs, &c., which should be in a green state, and after the fire is once started, it should be partially smothered down to prevent the materials from blazing freely, otherwise the mass will be reduced to nothing but fine ashes. Old bricks and brickbats form the best material for placing over the drain pipes to make the foundation for the border, and they should be broken to three sizes, using the finest grade as a matter of course for the top layer. Bricks or brick rubble are much warmer than stone for this purpose, and besides this, stone is not easily procured in many places.

The loam should be dug and carted at once to a convenient spot, and as handy to the spot where it will be required as possible. Preserve enough whole turves for covering the drainage with, also for building up the fronts of borders when the latter are above ground level and have no retaining wall. The remainder should be roughly chopped, after which add the

various ingredients deemed necessary. We mix the whole together and throw the mass into a long ridge-shaped heap, and let it lie in that condition until required for use. As loam varies so much in character, they must be dealt with according to their merits; no hard and fast rule can be laid down as to what should be added to them to make them fertile, but the materials mentioned in this note act in a beneficial manner, and with the exception of lime rubble, which should be used for medium or heavy loams alone, they can be added to all classes of soils alike. Both charcoal and wood ashes are great helps in keeping the compost open and sweet, while they absorb and retain a great deal of moisture which the roots soon discover by the way they both penetrate and cling to the particles. Manures, such as crushed bon and bone-meal, may be added in varying quantities according to the quality of the loam, but the quantity used should not exceed 1 cwt. of the latter for every ton of soil. For Vine borders a manure can now be purchased called Vine border compound, which contains all that is necessary both for the present needs of the Vines, and for several years to come. This can be highly recommended, while it saves the trouble of buying and mixing the necessary manure at home.

In any case every requisite should be ready to hand, and the work undertaken as soon as circumstances will permit, and as success depends so much on the operation being quickly performed, the necessity of being thoroughly prepared is quite obvious.

A. W.

## GARDEN FLORA.

### PLATE 1133.

#### LATHYRUS SPLENDENS.

(WITH A COLOURED PLATE.\*)

THIS is a perennial Pea with four-angled stem about a dozen feet long, slender pinnate leaves and erect axillary peduncles, each bearing from six to twelve large carmine-red flowers. It is native of Southern California, where it was discovered about twenty years ago, but it does not appear to have attracted the attention of horticulturists until a year or two ago, when Mr. Orelt, writing in *Garden and Forest*, drew attention to its merits as a garden plant. While wild it is usually found creeping over bushes and when in flower it thus presents the illusion of a grand flowering shrub. It is known in the United States as "Pride of California." In 1894 Professor Greene, of the University of California, sent seeds of it to Kew. They were sown under glass, and when strong enough the plants were placed in the open air. Here they grew fairly well, but failed to flower. In April 1895, one of the seedlings was planted in a bed of sandy soil in an airy greenhouse in which Cape bulbs are grown. Here it grew vigorously, forming a thick tangle of Sweet Pea-like stems. No flowers were produced until the spring of this year, when in March buds appeared in almost every leaf axil of the young shoots, and for about three months there was a continuous display of beautiful flowers, such as are represented in the accompanying plate. The colour is unlike that of any other Pea flower known to me. Thus grown this *Lathyrus* is a first-rate greenhouse plant; it is perennial, stands London fog, and yields a large and continuous crop of richly-coloured flowers in spring.

\* Drawn for THE GARDEN in the Royal Garden Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.



LAMPROUS FLORIDA



The strongest of the shoots got somewhat "rusty" after flowering, and were therefore removed, but the plant is now again in vigorous growth, and will no doubt be equally good next year. Seeds were ripened by the Kew plant; here are also seeds of it offered in the catalogues of American and other nurserymen.

Mr. Sturtevant writes that in his garden at Los Angeles, California, this *Lathyrus* usually flowers in February, but sometimes it begins in October and continues all winter, producing its greatest amount of bloom in February and March. In a note recently communicated to the *Gardeners' Chronicle* by Dr. Franceschi, of California, it is stated that this plant is not common in California, growing only in San Diego at the extreme south, and also in Lower California. Although a native of the desert high region of the interior, it adapts itself freely to liberal watering, provided it has sufficient drainage, and in this case it will keep growing and blooming all summer. It ought to prove hardy under the same conditions as answer for Fremontia and Ronneya. In the warmest parts of the United Kingdom it is worth trying in the open air, and, judging by its behaviour at Kew, it would probably prove an ideal plant for such gardens as that of Mr. Haubury at Wentone. It does not appear to be happy under cultivation in the northern States of America, where one would expect it to grow and flower as freely as the Sweet Pea does here.

W. W.

## THE WEEK'S WORK.

### FRUIT HOUSES.

FIGS.—Pot trees will have been relieved of their second crop of fruit ere now, and should, therefore, be got to rest as early as possible if required again or early forcing. If the wood is ripening well, the pots may be stood outdoors in the full sun under the shelter of a hedge or wall, but if yet immature, keep them under glass or in the house in which they have been growing during the summer. Here, under the influence of full sunshine and an abundance of air, the wood will soon mature, without which it is useless to look for fruit next season. The trees should be relieved of all green fruits which may have formed while the second crop was ripening, and if the inner part of the bushes has been allowed to become rounded with young shoots sent up from the base, these should be cut away; or if too much wood has been allowed to develop in any part of the tree, thin out the same at once, cutting out that which is weak and sappy. Before the leaves are shed, repot or shift these trees into larger pots as the case may demand, and until the leaves drop, keep them moderately supplied with water. Repotting is best done now, as new roots are then formed in the fresh compost before the trees go to rest. Planted-out trees started early in the year should now be ripening their wood. This should also be thinned out if too much has been laid in, and all fruits above the size of Currants should be pulled off. Give all the air possible, and, as the blight ripens, gradually reduce the supply of water at the roots. Root pruning of trees which have got into an unsatisfactory condition should also have attention now, and if the failure has been caused through rampant growth being made, and a too rich border, curtail the roots by confining them to borders of limited extent. This and the substitution of soil of a poor character, in lieu of that already composing the border, will bring them back into a fruitful condition. In such cases as these the compost should consist of alcareous loam and lime rubble alone, using the latter in the proportion of one-sixth of the whole. Light loam may have marl or pulverised clay mixed with it with advantage, and in all cases the compost should be made very firm. Trees, the roots

of which are kept within limits by brick walls, or those growing in borders of limited areas which are kept in place by means of turf walls, are always the better for having their roots shortened back with a medium of new compost, and new turf walls built for them to root into another season. It is astonishing what a small amount of soil the Fig will flourish in when restricted if well fed from the surface during the season of growth. The wood made in such cases is always of a most fruitful description, because the roots cannot ramble away from home, and this is the true secret of success in Fig culture under glass. I have a tree at the present time which covers about 360 square feet of trellising, the roots of which only have about 2 cubic yards of soil to grow in. This tree carries two crops of fruit annually, the second, of course, not equalling the first in point of size, but they are none the less appreciated on that account. Trees in other houses ripening their second crop of fruit should not be neglected in the way of watering, but the syringe had better be withheld and damping down reduced to a minimum, or discontinued altogether if the situation is a low one, otherwise the fruits will spot and decay. The house should also be aired abundantly during fine weather, but when wet admit a little air at the front only, and turn on a small amount of heat to keep the air dry and circulating through the house. Late houses, from which only one crop will be gathered, should be freely aired during the day, especially if unheated, and the fruits are commencing to ripen. When such is the case, syringing and damping must necessarily cease. Moisture must, of course, be supplied to the roots to keep the fruits swelling up to the last, but discontinue feeding when they commence to soften, otherwise size will be gained at the expense of flavour.

PEACH HOUSES.—As the crops are cleared from the trees in successional houses, thin out the wood as directed in a previous calendar, and take steps to give them a thorough cleansing with an insecticide if they need it. In any case a good hosing or a wash with the garden engine now and again is always beneficial to the trees, as it enables them to retain their leaves until the latter have fulfilled their proper functions. Open all ventilators to their fullest extent, and see that the borders receive as much water as they require, giving established and aged trees diluted liquid manure now and again if it can be spared. Houses in which the fruits are ripe and ripening must be kept dry when the weather is fine, but on wet days and cool nights a little fire-heat will be needed, especially in cold districts. Look the fruits over daily, or every other day, and if this is done but few of them will drop, while those gathered will be of better flavour than if allowed to remain on the trees until dead ripe. Fruits on trees in late houses will be fast swelling, and as the Peach crop outdoors is admittedly a short one in the majority of cases, the value of these late fruits will be considerably enhanced. Good feeding is essential, whether the borders are inside or out, or both, to enable the fruits to attain full size, as such varieties as Exquisite, Late Admirable, Princess of Wales, Sea Eagle, Goshawk, Pine-apple, Pitmaston Orange, Victoria, Humboldt, and other choice Peaches and Nectarines will swell to a very large size if generously treated. As the nights generally get much cooler after this time of the year, syringing must be done more cautiously, as the leaves should always be dry before night. If this cannot be ensured, syringing had best be confined to the mornings, and if the trees are clean this will be sufficient to keep them so. A little air may be kept on through the night, which should be gradually increased as the day wears on; when bright, and if necessary to hurry the crop to maturity, close with sun-heat in the afternoon. If, on the other hand, it is desirable to delay the ripening as long as possible, keep the house fully ventilated. Keep all gross growths suppressed, and laterals pinched in regularly, to cause an equal flow of sap, and if elevating the apex of the fruits to-

wards the sun has not had attention, it should be done before the fruits become too heavy and they begin to soften. Where this has been done, fully expose the fruits by pushing or tying the leaves on one side, so that the sun may shine full upon them and ensure high colour.

LATE POT PEACHES.—These will require much the same treatment as the permanently planted trees, only they will need water much oftener. Feeding either with artificial or liquid manures should be pursued up to the time the fruits commence to ripen, and then cease. After this give pure water, and no more than is necessary, because if over-done the flavour will be flat and insipid. As the trees are cleared of fruit cut away all superfluous wood, and when the leaves show signs of ripening get any rotting or tubbing done, and keep them under cover until the leaves drop, with the house amply ventilated if the autumn should prove wet. If fine and warm, they will be all the better for being stood outdoors.

A. W.

### KITCHEN GARDEN.

KIDNEY BEANS.—So long as a good supply of Scarlet Runners is forthcoming there is little demand for the dwarf varieties, but those who have to keep up a good supply of choice vegetables know the value of these in the autumn, when the former are cut down by frost, which often happens in September, long before other things less tender feel any ill effects from a low temperature. To guard against a break in the supply it becomes necessary to again resort to pot or frame culture. The latter is certainly to be preferred for autumn crops, if the frames are provided with only a small amount of hot water pipes. Where such pots or frames are not at command, pots or boxes must be used, so that they can be transferred to a warm house, when it becomes necessary to use artificial heat. It is better to make an early start, so that the plants will make sturdy growth during the coming month with as little protection as possible, whether they are to be grown in pots or planted out in pits. This is better than waiting until the outside supply is cut off and then resorting to hard forcing. Heated pits in which a crop of Cucumbers or Melons have recently been produced may be used with advantage. The same soil will grow a good crop of Beans without further trouble, beyond forking it over and affording a good watering if necessary. There is no comparison between plants grown in this way and those in pots, as regards the yield. Of course the lights are dispensed with as long as possible, and only replaced at night when there is danger of frost, or to ward off heavy rains; even then fire heat should be withheld if possible, and only applied when really necessary. Select dwarf-growing varieties, such as Earliest of All, which is most suitable for this treatment. If pots or boxes have to be used, these should be filled with a rich holding compost, which should be made moderately firm before sowing, as this assists the formation of sturdy growth, and the plants will not require watering so frequently. Good drainage is very necessary, but it would be safer to stand the pots in a cold frame, so that they do not become over-charged with moisture after heavy rains. Sowings recently made on warm borders will prove most valuable for late supplies, if a frame or some other temporary protection can be afforded as the nights become colder. Indeed, it would be wise to have sheets of tiffany, or some other light covering, ready for placing over both the dwarf and the taller kinds, as a slight protection of this kind may save the plants from one early frost, and they will go on bearing for weeks afterwards.

VEGETABLE MARROWS.—Like the former, these often succumb to one early frost, which is very disappointing when perhaps for weeks afterwards the weather remains fairly mild, and for the want of a little timely attention their season is so much shortened. Seeing that we have a long time before us when there will be only a small variety of outside vegetables to select from, it becomes

necessary that we should retain the summer ones as long as possible. A framework of stakes can be easily arranged round the bed on which the plant are growing in such a way that mats may be used immediately frost is expected.

**SPRING-SOWN ONIONS.**—The time has arrived when these should be got out of the ground, carefully harvested, and stored away in their winter quarters. Much depends on the way the bulbs are ripened to insure them keeping properly through the winter. In most beds a good proportion form thick necks, and longer time is necessary to mature them properly. It is a good plan to go over the bed and bend such as these over with the back of a rake; a few hot days afterwards will cause the tops to wither, when they can be pulled up and placed under cover, spreading them out thinly so that they can get plenty of air and become firm before they are stored away. The small silver-skinned varieties should be carefully ripened before they are used for pickling, to insure them being both crisp and clear in colour. Other vegetables used for mixed pickles, such as Cauliflowers, French Beans, Gherkins, Radish pods, &c., should be sent into the kitchen while they are plentiful, leaving Red Cabbage for some weeks later, as this is generally preferred after it has been subjected to a little frost.

RICHARD PARKER.

## FRUIT AND VEGETABLE CROPS.

### SYON HOUSE, BRENTFORD.

THE fruit crops in this neighbourhood are not up to the average, and if we take the most useful one, the Apple, it is much below the average. There is, I regret to say, in many instances trees without a single fruit, whilst a few have a full crop. The Codlin varieties are the best this season, and this is remarkable, as I have observed these varieties fruit very freely one season and fail the next. Keswick Codlins are good. Manks Codlin, grown largely in this district, is, I might say, a failure. Lord Grosvenor and Lord Sutherland are bearing heavy crops, and a few late-looking kinds, such as Lane's Prince Albert and Alfriston, have excellent crops. Dessert Apples are not at all plentiful. King of the Pippins has only half a crop, the valuable Russets none at all, and late keepers of all kinds will be very scarce. We have only a few Blenheim's, but early kinds, such as Devonshire Quarrenden and Irish Peach, are a full crop. Lady Dudley is fine both in crop and size of fruit. Pears, like Apples, are much under average; the early kinds are best. Williams' Bon Chrétien and Margaret Marillat are our heaviest croppers. Louise Bonne of Jersey, which rarely fails with us, is good, and I notice a few trees in the district bearing well on walls, but bush and standards are poor this season. Our young trees on west walls are good. Such kinds as Marie Louise, Conference, Durondeau, and Beurré Diel have full crops, with a fair quantity of Pitmaston Duchess and Soldat Laboureur in bush form. I regret we have but few late Pears, and, unfortunately, such second-rate varieties as Beurré Bachelier and Clairgeau are laden, whilst there are no Doyenné du Comice. I had this season the poorest crop of Apricots I have had during the past few years. The frost and hail ruined the fruit early in the spring; the best was the Large Early. Peaches and Nectarines are excellent both in crop and quality. They have done well where well attended to with moisture. Amsden June was the earliest Peach in the open. This was very good, and I am pleased to note we now have a good companion Nectarine in Early Rivers. This is a grand acquisition, large, good, and hardy.

I had splendid fruits in quantity before July was over. All kinds of Peaches and Nectarines are good, the trees clean and ripening up the wood well. I never saw Lord Napier produce such fine fruit in the open. I feed and water freely and allow young trees to grow freely, never checking when there is ample wall space. Plums are a failure. I have these as cordons, bushes, and on walls, and have scarcely any fruit. Victoria, usually abundant, is poor. I have a few Gages, Golden Drop and Prince Englebert. Damsons are very scarce indeed; the Farleigh variety is the only one giving any fruit. Cherries had a nice crop and good fruit. Such varieties as Early Rivers and Governor Wood were excellent. Morellos were an average crop, but few fruits. I grow a large quantity of these, but they did not come up to the usual standard of quantity. Small fruits, such as Strawberries, exceeded our expectation. I had a fine crop. I only fruit young plants, in most cases treating them as annuals. Royal Sovereign is the heaviest cropper. It is good on a light soil, and Lord Sutherland with Latest of All did grandly. Raspberries, though plentiful, were soon over, owing to heat and drought. Superlative was the most reliable cropper. Currants and Gooseberries were an average crop.

Vegetables have suffered much from drought, and in light soils, unless given special culture, were poor. There was no difficulty in getting early supplies, as, owing to a mild winter, spring Cabbage was early and good. There was no lack of good Broccoli, and Asparagus was abundant. Peas, owing to drought, were soon over, and unless special attention was given to variety to suit the soil the crop was poor. Potatoes have been good, but early kinds were not very plentiful. In many cases they were cut by frost, and drought affected others. Later ones promise well in deeply cultivated land, and so far I have seen no disease. I fear, unless we get genial rains, we shall have a scarcity of good winter vegetables, as the plants make poor progress. The soil is very dry at the time my note is written, but with rain growth would be rapid.—G. WYTHES.

### SOUTHERN.

**Aldenham House, Elstree, Herts.**—The fruit crops in this district are poor, especially Apples, Plums, and sweet Cherries. Morellos are good. Apricots good. Pears average. Small fruits good, particularly Gooseberries. Strawberries plentiful and good. Nuts very abundant. Vegetables are good. Potatoes clean and free from disease.—E. BECKETT.

**Old Warden Park, Biggleswade.**—Apples under average, but the fruit is generally good and the trees are clean and healthy and making excellent growth. Pears are under average. The fruit is generally good, but rather small, the trees very clean and healthy and making fine growth. Plums are very thin on bush and standard trees, but better on walls with a south aspect. The fruit is clean and good and the trees healthy. Cherries under average, not much grown except Morellos, which are good. Peaches and Nectarines on unprotected walls are a good average crop, the fruit very fine. Apricots under average. Gooseberries and Currants very thin. Raspberries are an average crop. Superlative is the best variety grown here.—G. R. ALLIS.

**Luton Hoo, Beds.**—In this district Apples are under average. Pears are better, but these too are not up to average. Peaches on the open walls are very thin. The same applies to Apricots. Plums and Cherries on the walls are slightly under average, on the standards none. All bush fruit has been scarce. We have had a short season of Strawberries; the crop was light, but the quality was all that could be desired. With the exception of Apples, there was a good show of fruit in

the spring, but the cold early months of the year proved too much for a good set. Added to this the severe hailstorm which broke over here on June 24 played such havoc as to permanently injure what fruits were left on the trees.

With the exception of Cauliflowers, all vegetables have been good.—GEO. H. MAYCOCK.

**Elmstead Grange, Chislehurst.**—Fruit crops in this locality cannot be called a success the bloom in many instances being damaged by late frosts and the hailstorm of June 6. The latter played havoc with Apples, Pears, &c., the few remaining on the trees bearing the marks to this day.

Vegetables, notwithstanding the dry season and the above-mentioned hailstorm, have done remarkably well. Peas, early and second early, have been a splendid crop; later and taller varieties have suffered from want of rain. Winter vegetable look fairly well, but require copious rains to put them on.—J. BLACKBURN.

**Olandon Park, Guildford.**—Fruit crops in this garden and in the district are far below the average. Apples are very small owing to dry weather, and fruit on trees that are bearing a fair crop are infested with maggot and falling of wholesale. In some places near here you may see an orchard here and there bearing good crops, but they are few and far between. Pears are very scarce, but what there are appear to be good Espalier trees have done best with me this season there being scarcely any on the standards. Plum are very light all round. Peaches and Nectarines are much below the average, but will, I think, be fairly good, as they have finished stoning and are swelling fast. The only way I can account for the scarcity in this garden and adjoining district is the late frosts, as there was plenty of bloom on all kinds of fruit trees.

Vegetables, taking the dry weather into consideration, are very good, but everything need rain badly. Early Potatoes were light, owing to their being cut back by frost. Mid-season varieties are very good and late Leeks very promising but I am afraid if wet sets in it will cause disease. Winter stuff of all kinds looks wonderfully well in most places.—H. W. BLAKE.

**Mentmore, Bucks.**—Apples are only a poor crop, although a few varieties are bearing freely such as Worcester Pearmain, Stirling Castle, Sea ton House, Calville Boisbunel, large and very fine Ecklinville, Mr. Gladstone, Jefferson's, Oslin, Ribston Pippin, large and good on young trees Prince Albert, Lord Sutherland, Yellow Ingestre and Keswick Codlin are all bearing a good crop. The trees are growing very freely and are free from blight of any kind. Pears are about half a crop on walls, standards, and bushes. Peaches and Nectarines about the same. Apricots very poor. Nuts a heavy crop. Small fruits of all kinds abundant and good.

Potatoes are small, but good in quality and free from disease. Beans and Peas abundant and good. The soil here is a strong loam resting on chalky clay, so that a dry summer is always best, and hence all kinds of vegetables have been abundant and good.—JAMES SMITH.

**Cliveden Gardens, Maidenhead.**—Pears, Apples, and Plums are a poor crop. Cherries are a failure. Strawberries and all bush fruit are above average crop. Peaches and Nectarines on walls outside excellent. Apricots made average.

All vegetables are very good. Potatoes very clean and no disease.—A. B. WADDS.

**Yattendon Court, Newbury.**—Apples about half a crop. Some varieties, as Lord Sutherland, Warner's King, Tower of Glamis, and Ribston Pippin are good, and in our village I have seen some good crops of common Apples. Of Pears we have a fair crop. Victoria and Pershore Plums are good. Cherries on standards a failure. Morellos on wall fair, but troubled with black fly. Currants and Gooseberries about half a crop. Raspberries and Strawberries a very good crop. I may add that we sprayed Pears and Plums twice with a diluted Bordeaux mixture and Paris

reen, and I find that what is safe for Apples, Pears, and Plums, injures Cherries.

Vegetables good. Early Peas a wonderful crop, 2 feet higher than normal height. Cauliflowers fine. Onions, Carrots, Parsnips good. Potatoes an excellent crop, free from disease and of good quality.—R. MAHER.

**Harewood Lodge, Sunninghill.**—Apples a total failure with me. Pears a trifle better, and on walls in many places good. Plums over average. Gooseberries very abundant. Red Currants fairly good, black very scarce generally. Raspberries scarce. Apricots partial crop only.

Peas were abundant and good up till last week in July, when all late sown ones collapsed through mildew in spite of being sown in spacious trenches and liberally supplied with water. Dwarf Beans very abundant. Early Potatoes are satisfactory, but late ones are suffering from want of rain. The same remark applies to all the Brassica family, club being very prevalent.—C. DEAVIN.

**Cassiobury Park, Watford.**—Apples are under average. Pears almost a failure, and Plums poor. Peaches and Nectarines good crops on walls. Cherries almost a failure; Morellos under average. Apricots under average. Small fruits average. Strawberries and Nuts are average crops.—CHAS. DEANE.

**Royal Gardens, Windsor.**—This is by no means a good Apple year in consequence of the sharp frost on May 6 (8°), and the succession of wet, cold days whilst the trees were in bloom. Of early cooking varieties we have an average crop, but of later or long-keeping sorts the crop is generally light. The same may also be said of lessert varieties. The sorts carrying the best crops are Lane's Prince Albert, Rosemary Russet, Frogmore Prolific, Paradise Pippin, and the Codlin varieties. We have every form of trained tree, but I cannot say that any one particular form is bearing better than another. Pears are a long way from being a heavy crop; at the same time, I am told by visitors who call that we have our full share. It is rather singular that the best flavoured varieties, such as Thompson's, Doyenné du Comice, Fondante d'Automne, Williams' Bon Chrétien, Gratioli of Jersey, &c., are the scarcest. Plums, I am sorry to say, are quite a failure. Damsons the same. Peaches out of doors are excellent, both as to crop and quality of fruit. Nectarines the same. Apricots are bearing a specially heavy crop of excellent fruit, and the trees looking healthy and well. In spring our Peaches, Nectarines, and Apricots are well protected by tiffany blinds until the fruit is well set and the trees were well furnished with foliage, and during the summer they are frequently washed with the hose and well mulched and watered in hot weather. Cherries in the open quarters have been a failure, but on the walls they have been splendid, and, as we have trees growing on every aspect, the season for this favourite fruit is prolonged to the utmost. Some of our best sweet Cherries are picked from trees growing on a north wall. Gooseberries are about half a crop. Black Currants almost a failure. Raspberries moderate crop, and Nuts generally good.—OWEN THOMAS.

**Wrotham Park, Barnet.**—There was an abundance of blossom on the Apple trees, but only a poor crop on the whole; in fact, in some gardens there is scarcely an Apple. Here we have a very partial crop, some varieties heavily laden with good fruit, others with either none at all or only a few, but good samples. The best here are Stirling Castle and Lane's Prince Albert, then come Worcester Pearmain, Cellini, Lord Grosvenor, Bess Pool, Duke of Devonshire, May Queen, The Queen; all these are bush or pyramid trees and young, having in fact all been planted within the last seven years. Keswick Codlin and Dr. Harvey among the old standard trees are carrying heavy crops. Pears also blossomed well and on the whole are an average crop of good fruit. Here on young trees on a west wall we have nice crops of Williams' Bon Chrétien, Beurré Diel, Easter Beurré, Bergamote d'Esperen, Winter Nelis,

Josephine de Malines, Doyenné du Comice, Pit-maston Duchess, Beurré Clairgeau, and Marie Louise. On the Plums there was plenty of blossom again, but very little fruit on the whole, Victoria being the best crop. Grand Duke, Archduke, Rivers' Early, and Old Orleans are also carrying a few nice fruits; all these, however, are on an east wall. The bush and standard trees in the garden have nothing at all on them, this in a great measure being due to the birds—bullfinches principally—devouring the buds in early spring. Peaches are about an average crop, although they did not require much thinning this season, many of the blooms and small fruit being cut by the frost and cold winds so prevalent last spring. Much of the foliage is badly blistered. Figs are rather over an average crop this season here, and the fruit promises to be fine. In the case of sweet Cherries, a splendid blossom was followed by almost a total failure in the crop. The frost completely spoilt all chance of any fruit. Only one tree here had any fruit at all—a May Duke on a south wall. Morello were better—an average crop of good quality. Among the small fruits, Red Currants were much above an average crop and very fine, as also White. Black, on the other hand, were very much below the mark and the fruit poor in quality. Gooseberries very uneven—in some places plentiful, in others scarce. Strawberries over an average crop and very good, but the season short. Waterloo stood the drought well here and gave some very fine late fruits. Raspberries a failure on light soils, as here; better on heavier ground. Apricots very poor, although there was a good show of bloom, but they, like the Peaches, suffered from the frost. Filberts are an unusually heavy crop, and Walnuts are very scarce.

Vegetables taken altogether are very good, Potatoes yielding well and up to the present showing no signs of disease. Peas have been plentiful and good up to now, but the hot, dry weather has brought mildew, and, unless from the latest sowing, which may give a few pickings, they are practically over. Carrots and Turnips are poor in some places. Onions, Beet, Parsnips, and the winter crops are all looking very well. Runners are doing very well, though they were rather late in coming in.—G. RINGHAM.

**Claremont, Esher.**—The fruit crop of 1897 must be described as slightly below the average, although the expression is really applicable to a few things. On the whole, there is not much to complain of. Apples are very thin, absolutely the worst crop I have ever known; tree after tree, alike of bushes, pyramids and standards, being without a single fruit. Apricots are thin, but the fruit is large and of excellent quality. Dessert Cherries were a good crop, but Morellos below average. Plums are also much below; the best results are from a south-west wall on a south-easterly aspect, where most of our trees are. A bitter wind played on them continuously for several days when the bloom was expanded, accompanied by frosty nights. Pears are barely half a crop. There was plenty of bloom and the set seemed right, but three parts dropped when about the size of marbles. Peaches and Nectarines are very good; indeed, on a stretch of wall 150 yards long there is not a single failure. Figs and Nuts are both above average. Small fruits have been well up to the average, with the exception of Black Currants. Insect pests have been rather troublesome, but aphid in various forms, also red spider—that is strongly in evidence on our light, sandy soil—have been kept in check by heavy and repeated washings. Earwigs are the worst enemy on the Peach wall, but the bean traps were put in early and thousands have already been captured.

Vegetables were never better. All roots were looking clean and healthy, and the greater part of the winter-green crop was just planted when the first heavy storm came, and gave everything a grand start. Potatoes are a heavy crop, but the disease, I am sorry to say, is making its appearance. Remedial measures in the way of cutting off and carefully clearing away every particle of haulm

are resorted to as soon as there is any sign of ripening.—E. BURKELL.

**Bearwood, Woking.**—This is the worst season we have had in this neighbourhood for years. Apples, Pears and Plums are quite a failure, and owing to the drought the fruits are very small and maggoty. Peaches and Nectarines are a thin crop; Apricots the same. Cherries bad. Bush fruits have been a poor crop and small, and owing to the continual cold weather in blooming time, everything got much injured by blight. Strawberries have been an average crop. Many of the earlier sorts got much injured by the sharp frost in blooming time. Our best Strawberry for our general supply is the British Queen. Early sorts are Keens' Seedling, Noble, Viet. de Thury. Sir Joseph Paxton is grown for market in the open rather largely.

Vegetables have been fairly good up to the present time, but are now giving up from want of rain. Potatoes, early and second early, are good; late sorts, I fear, will fare badly.—J. TAGG.

**Wrest Park, Amptill, Beds.**—Apples are under the average. Cherries, too, poor. Damsons a very light crop. Apricots much lighter than in 1896. Plums average on walls, under average on standards. Peaches good average crop all over. Nectarines average crop on early and late trees. Pears on walls and standards are over the average. Strawberries of all varieties a good crop. Gooseberries average. Currants very good average crop, and Raspberries average.

Vegetables very good in the garden, but much in need of rain, as Broccoli, Cauliflower, Peas and Carrots are now suffering from the long spell of drought.—GEORGE MACRINLAY.

**Elvetham Park, Hants.**—The fruit crops generally were very promising here until May 12. On the above date we registered 10° of frost at 9 p.m., which continued throughout the night, proving disastrous to the Apples and Pears, with the exception of Pears on the wall trees, which are carrying a fair crop. The Strawberries would have shared the same fate had they not been covered over with straw in the evening; being thus protected, a very good crop was secured. Gooseberries, Currants, Raspberries, and Plums under average. Dessert Cherries fair crop, Morello Cherries very good. Apricots fair crop. Peaches abundant.

Vegetable crops are satisfactory. Peas, both early and mid-season, have done well. Late Peas are beginning to feel the effects of the recent dry weather. I grow Ne Plus Ultra largely for latest supply. Broccoli with few exceptions stood the winter well. I finished cutting Model on June 8. I always take the old precaution with Broccoli in the autumn in having a trench taken out on the north side of the rows, heeling the plants over, taking care the stems are covered up close to the lower leaves, this being a check to root action, and thus making the plants more hardy to withstand the winter. Autumn sown Cauliflowers have done equally well, coming in a few days after the Broccoli were over. Early Potatoes have done well this season and are free from disease.—G. MITCHESON.

**Falconhurst, Edenbridge, Kent.**—The fruit crop in this locality falls very short of the average, and is in some cases almost a failure. The appearance of the trees in the spring gave promise of very heavy crops, but the frosts, accompanied by north-east and east winds which we experienced on no less than ten nights during May, played havoc with them. Peaches and Nectarines being seriously damaged, more by the east wind than frost. From June 1 to August 7 the drought and hot sun caused the bush fruit to ripen early and drop off wholesale. The total rainfall for that period in this district was 2.18 inches as compared with 6.27 inches for the same period of last year. Apples are a very thin crop, fruit small, and some trees a total failure. Pears are a better crop, but the fruit is very small. Peaches and Nectarines are scarce. Plums and Damsons are a thin crop. Cherries were poor, while Figs are extra good. Black Currants were a good heavy crop with me, but scarce in the district;

Red and White were plentiful. Gooseberries are under the average. Raspberries were a good crop, but the fruit was small. Early Strawberries were very good, but later varieties were not at all satisfactory, the fruit being small and the crop soon over. Nuts and Filberts plentiful.

The drought and heat combined have in many instances proved too much for vegetables. Potatoes are a good crop, and free from disease, so far as early sorts go. If rain comes now I am afraid it will be too late to do late kinds any good, but might cause disease. Early and second early Peas were very good, but main-crop Peas a failure. I have some late ones looking very well, and if rain comes they promise to yield well. Broad Beans were a good crop. Runner and dwarf have grown well, but set badly. Onions, Carrots, Beet, and Parsnips are plentiful, but very small. Tomatoes are a splendid crop, the fruit of fair size and plentiful. Globe Artichokes were never better. Every kind of Brassica is stunted, and I doubt if a good many will be worth saving. Winter and early spring vegetables will be very scarce in this district.—A. CANNON.

**Theydon Grove, Epping.**—The fruit crop in this garden and neighbourhood, as far as I can ascertain, is the poorest we have had during the nineteen years I have been here. The late spring frosts did serious damage to all kinds of fruit, and the severe hailstorm throughout Essex of June 24 destroyed what prospects we had. Peaches and Nectarines outside are very light. Apricots the same. Plums very few. Pears on the wall a good crop; standards none. Apples, what few there were, were destroyed by the hail. Strawberries, Raspberries, Gooseberries, Currants, and Morello Cherries promised well, but the greater part destroyed by the hail.

The vegetable crops suffered very much from the hailstorm; up to that time they looked very promising. The Asparagus, early Peas, and Potatoes were good, but Peas from the date of the storm are a failure. Beans, Marrows, and other late vegetables are recovering. The second early crop of Potatoes is very light, as the haulm was quite destroyed.—GEORGE HEWITT.

**Caddington Hall, Dunstable.**—The fruit crops in these gardens and immediate neighbourhood are rather under the average. Apples are very scarce. Pears are plentiful here and also in the district. Plums very thin. Prunes are very thin. We had a very poor crop of Gooseberries and Red Currants. Black Currants about half the usual quantity. Raspberries were a fair crop. Strawberries were an abundant crop.

The vegetable crops in these gardens and neighbourhood are, on the whole, very good, though we have suffered considerably from the drought. Rain is very much needed for the winter vegetables. Early and second early Potatoes very good crop and free from disease. Late kinds want rain to finish off growth. Cabbage and Cauliflower have been very good. Peas, Beans, &c., have been good crops and the quality excellent.—W. STANTON.

**Buxted Park, Sussex.**—Apricots on walls facing S.E. were good, particularly Moor Park, while those on other aspects suffered severely from the late spring frost. Peaches I never saw cut up so badly as they have been this season. The blister was so bad in the early part of the summer that not a leaf was to be seen without it, the consequence being that there is no fruit of any account. Trees on south-east walls suffered most. There is no difference in this respect between those said to be hardy and the more tender kinds. Pears on walls are carrying fair crops, while standards and bush trees have scarcely a fruit on them. Plums are a partial crop, some varieties being loaded, while others have not a fruit. Orleans, Victoria, Blue Gage, Coe's Golden Drop, The Czar, and a few others are the best. Apples are also a partial crop, some kinds being plentiful, while others have not a fruit. The best are Stirling Castle, The Queen, Hawthornden, Pott's Seedling, Lane's Prince Albert, Warner's King, Ecklinville, Cox's Pomona, and Irish Peach. Currants, both Red

and Black, were good, but Gooseberries were only a partial crop. Raspberries were abundant, particularly Prince of Wales and Superlative, but the dry weather caused them to very soon go over. Nuts, Filberts, and Cobs are good, but Walnuts are a failure.—H. C. PRINSEP.

## TREES AND SHRUBS.

### THE WISTARIA.

ALTHOUGH written many years ago, since which time great numbers of plants have been introduced into this country, Loudon's words, "that this plant may truly be considered the most magnificent of all our hardy climbers," is just as applicable at the present day as it was when the above was written, for it has not been surpassed or even equalled since then. The Chinese Wistaria is so well known that nothing further need be said as to its general appearance, except that the large massive clusters of lilac-purple blossoms are in colour very distinct from anything else in bloom at that time. It is generally



The Wistaria on a balcony. Engraved for THE GARDEN from a photograph.

treated as a wall plant, where it will soon cover a considerable space, but it may also with advantage be employed in other ways: for instance, being of such vigorous growth it will rapidly make its way into a neighbouring tree if opportunity occurs, and in this way some charming and picturesque effects may be produced. Again, it may be used for covering an arbour, screen, or anything in that way, a good instance of which is to be seen at Kew, where there is a large circular arrangement of iron-work completely clothed with this Wistaria, which in spring attracts everyone. True, the blooms are in an exposed position sometimes injured by late spring frosts, but in a general way this seldom happens, and when it does take place we often get a scattered number of flowers later on, while the beautiful pinnate foliage renders it an attractive climber throughout the summer. Though we seldom see any other but the Chinese Wistaria it is by no means the only

member of the family available, there being among others a pure white counterpart of it which, as far as my experience extends, appear to be equally free-flowering with the type, so that a charming effect might be produced by planting the two in close proximity. The double-flowered variety has been frequently figured and the subject of many notes, but it is greatly inferior to the ordinary form, and may be at once passed over. Another species is *W. multijuga*, which has been described as producing racemes of blossom over 2 feet in length. This certainly reads very attractive, and it is by no means a misrepresentation; but as a set off the individual flowers are smaller and of paler tint, while there is also a much greater space between them than in the case of the common kind, to which in ornamental feature it is much inferior. The oldest of the Wistaria is the North American *W. frutescens*, which was introduced during the early part of the last century, but at the present day it is rarely seen though very desirable, for it does not attain the dimensions of the others, and may therefore be grown in a more limited space, while the flower do not expand till those of all the rest are past. In this species the flowers are borne in shorter and denser racemes which are erect, or partially so. They may be trained to a wall or treated in any way similar to the other kinds, while being much less vigorous than any of them, it forms a very ornamental specimen if planted in the open ground trained round a few sticks, and the allowed to grow at will. Another feature possessed by this Wistaria is that the blossoms are pleasantly fragrant. Wistarias, as a rule, do not transplant readily owing to their stout, deep, descending roots; still, from this very circumstance they are enabled to resist drought, and will consequently succeed better in dry sandy soils than many other classes of plants; but, for all that, they much prefer a good deep loam.

**Cedars of Lebanon in Norfolk.**—So far as I know, Norfolk is not so famous for Lebanon Cedars as Essex, Kent, and Sussex but I recently saw some very fine old specimens at Beeston Park, near Norwich. One measuring one I found it to be some 25 feet in girth at the base, but, unfortunately many of the far-reaching limbs had died and had been sawn off close to the body of the tree. There were several others much higher than this one, but they had never had a fair chance so far as furnishing their bottoms was concerned, on account of being too thickly and closely surrounded by other trees. Their towering heads, however, showed well from a distance. It is a mistake to plant Lebanon Cedars amongst other trees. They should stand out boldly by themselves where their full beauty can be seen.—C. C. H.

**Summer-flowering shrubs.**—The yellow Spanish Broom is now charmingly in bloom, and there are many golden blossoms on various *St. John's Worts* (*Hypericum*). *H. Moserianum* is a good thing and worth general planting. Several masses of *Berberis stenophylla*, moved last spring, are now charmingly in flower. It is nice to have the flower now, even though the beauty in spring may be lost. I suppose the moving had some effect, though it is not uncommon for this and *Darwinia* to bloom in autumn. The Tamarisks are in bloom now, and a plant on a wall has attained large proportions. It is a pity the *Ceanothus* are not perfectly hardy. I have lost them so many times that I have ceased to plant them. An archway in an amateur's garden covered with the white *Clematis flammula* and the purple variety Jack-

anni was very pleasing; the blending of the colours and the training were perfect. Both these are hardy, and it would be better to plant known hardy things that will grow than tender plants which die. I hear of nurserymen selling thousands of these plants in pots annually. The reason for the large demand is that owing to the system of propagation being faulty many plants die, and have known these plants purchased by the same parties time after time, with the hope of getting them established at last. Jackmanni is one of the hardiest, and if propagated by cuttings or layering the plants soon get strong, and do not die. Two American trees, the Buckeye tree and the Calabash, are summer-flowering trees of distinct character. The Hibiscus and the Irish and Mediterranean Heaths may be added to the list of shrubs in flower.—E. H.

#### FRUIT CULTURE IN SWITZERLAND.

THE Swiss Horticultural Society, a new association comprising French and German groups of the societies and committees of horticulture and free societies of twenty-two cantons held a "pomologic congress" on September 24 last at Geneva at the time the national exhibition was held there, and the congress was presided over by M. Marc Richeli. M. Charles Baltet, of Troyes, who forty years earlier inaugurated the first French pomological congress at Lyons, was among those who took part. He writes in the *Revue Horticole* as follows:—

Fruit tree cultivation in Switzerland well deserves a special study. The fertile plains of Helvetia, the presence of lakes, together with the mountain slopes and elevated plateaux are productive of extremely varied results. In all such places the cultivation of fruit trees is carried on, and the markets and export trade are supplied therefrom. The conferences and exhibitions held in towns and villages and fostered by the state, by societies, and by the cantonal or communal administrations have had the effect of at once encouraging and locating planters, with the result that new orchards of considerable extent, in addition to the more modest garden, have been formed, and also plantations have had the benefit of a more enlightened system of cultivation, pruning and grafting. In reputation the produce of the Valais takes first rank, then next those of the Vaudois and the Geneva canton, next Friburg, Thurgovia, Zurich and Ticino, the last-named enjoying advantages as regards sun. In many districts the grower's aim has been to produce as well a good travelling fruit for exportation wholesale to, amongst others, the cider districts of near countries, like Northern France and Southern Germany, where it is used sometimes by itself and sometimes with other kinds. Among the Apples grown for this purpose we have—

*Aargauer Herrenapfel*.—A late-bearing kind.  
*A beignets*.—From the Jura (Vaudois), a plump, open winter Apple.  
*Blanche à côtes*.—A sweet preserving and cooking Apple.  
*Bachelette*.—A good eating Apple, from the Jura (Vaudois).  
*De Fer*.—Native of Gros de Vaud; a good keeping Apple.  
*De Prince*.—A firm, juicy Apple; will keep for a year.  
*Françoise*.—From Vaud; aromatic in flavour and good for all purposes.  
*Gros Bohnapfel*.—Much grown in Canton Fribourg.  
*Hausuli*.—Long well known in the market.  
*Palmapfel and Sauergrousch*.—Varieties which fit in the lower valleys, such as Grindelwald, and good for drying.  
*Quiken*.—A pretty fruit, originally from Wurtemberg.  
*Paradis d'Automne*.—Sweet; for preserving and cooking.  
*Petite Tardive*.—A white Apple; keeps long; rust tree.  
*Pomme Coing*.—Good for baking, preserving, and cider-making.  
*Pomme Rose*.—A popular fruit for garden, orchard, and market.

*Princesse de Wurtemberg*.—Very late and robust.  
*Reinette Bovarde*.—Handsome and good winter fruit from Canton Vaud.  
*Rose de Virginie*.—Quick grower; handsome and early fruit.  
*Rouge douce*.—Good cooking fruit; keeps till July.  
*Usterapfel*.—Yielding 100 bushels the tree.

In general, the trees which produce these diverse varieties, and which combine the qualities of robustness and fertility, are happy alike in the field and by the roadside. Experience has taught the cider-making peasant the superior virtues of the following: Reine des Reinettes, Reinette de Caux, Reinette d'Osnabruck, Reinette Baumann, Reinette de Châtagnier, Calville de Dantzig, Saint Nicolas, together with Bohnapfel Breitacher, Fraurotacher, Spatlauber, Spitzweisser, Waldhotter well known in the lists of cider Apples beyond the Rhine, the last-named variety often heading the list of fruits destined for the cider press. At the same time, the cultivator does not forget the Gelber Jacobs Apfel, a cooking Apple so much in demand in Thurgovia for cider making, that there is a proverb to the effect that "He who knows not Jacob's cider is no Thurgovian."

In the cantons Thurgovia, Friburg and Lucerne, sparkling beverages are manufactured from Pears and Apples, and in many districts it is the custom to combine these two fruits, and thereby increase the yield of juice. Cider is of daily consumption in the household, the hotel and the inn. In speaking of

#### DESSERT APPLES

we cannot omit mention of two delightful Apples—Transparente de Zurich (an ivory-white Apple) and De Laet (with its delicate dead-white and scarlet skin). The trees of both, generally dwarf in growth, are good bearers, and offer a stout resistance to the winter frosts. Our own Reinette Ananas, with its reddish brown skin, is fertile also in the Valais; and we may now find cultivated, at an altitude of nearly 3500 feet, Russian Apples like Borowitzky, Antonowka, Titowka, Alexandre, as also some Canadian kinds.

The Pear also has its local varieties as well as those which are propagated by grafting. Thus we have

*Barbeyron*.—A from December to January fruit, delicious when cooked.  
*Botzi et Chaune*.—Fruits for drying and cooking.  
*De Frauler*.—Latest as regards vegetation.  
*Gelbmöster and Guntershauser*, which are popular in Argovia.  
*Gelbe Mostbirne*.—A robust tree on the high mountains of St. Gall, Appenzell, and Thurgovia cantons.  
*Lederbirne and Schwartzwalder*.—Hardy trees in the severe winter frost, growing at a height of over 3000 feet.  
*Loup, Mirzler, Grosse blanche de Champagne, Normande blanche ou verte*, which are a good addition to the juice of the cider Apple.  
*Thiersbirne*.—Yielding nearly two hogsheads of cider the tree throughout the whole of Eastern Switzerland.  
*Wasserbirne*, which, growing as large as an Oak tree, produces a light coloured and abundant Pear.

The Pear tree de Maude is propagated everywhere. The tree, which attains gigantic proportions in Savoy and the French and Swiss Alps, produces as much as from 800 to 1000 litres of cider. We can recommend as a good "all-round" Pear one of the most common in Switzerland, the Längler or Kannenbirne, or sometimes known as d'Estranguillon, which has always been a favourite for cider, baking, and preserving. Like the Pear Goliath, the Laustieglerin of Thurgovia is grown both for drying and for alcohol. It is a tree which bears at 200 years of age. There are many kinds which, like the last, are good for various economic purposes, and which fringe the roadsides of German Switzerland. Most of these are described and figured in a pomologic work published at Saint Gall, now out of print, but of which a new edition is expected shortly. It is our hope that a result of the pomologic sessions the congress may be to fix the value and to revise, if necessary, the nomenclature of the various species

in general cultivation. Besides the country orchards we should mention those gardens of dwarf or half dwarf trees which have been planted by cultivators of acknowledged skill with fine, good varieties of each season's fruits for the table. These plantations are fed from the nurseries of Swiss, French or German growers. Williams', Louise Bonne, Beurré, and Doyenné do wonders in them, and Pear trees, like Urbaniste, Baltet père, Josephine de Malines, are found to withstand the extremes of climate.

The espaliers of these gardens offer a whole series of Peach trees bearing fruit large in size and good in quality, scattered over the sheltered hillsides or in the vineyards. The Syrian Peach known as de Tullius and some native types are produced from the kernel. The climate of the Valais is as good for the maturing of the fine late sorts of Peach, Calville Blanche Apples in the open air and the Malvoisie Grape as the Lyons region is.

The Cherry tree does well in these districts, and in order to supply the requirements of the distilleries, it is found profitable to plant good kinds of Kirsch Cherries, such as Noire Commune des Avants, de Sovertz, de Montreux, à Queue Rouge, la Rouge Commune (which is a good fruit for drying), la Péquenette (which does well even in clay soils), and some unnamed local kinds. Cultivators of these have their own little nurseries for supplying their needs. Some Cantons plant the Kirsch Cherry, and orchards of these trees are found along the roads leading to la Béroche, in Canton Neuchâtel, whilst others massed on the slopes and plateaux of the mountains help largely to increase the revenue derived from rural industry. Dessert Cherries, like the White Heart, the Black Cherry and the Black Heart Cherry, succeed either as bushes or as standards. In the environs of Lausanne, the Chevanne, a black Cherry, is chiefly used for preserving. A white heart Cherry called Napoleon does well at considerable altitudes, as does also the black du Righi Cherry, which ripens in July.

For table, cooking, drying and distilling purposes, the Plum is in great demand, and we ourselves observed numerous unnamed varieties of white, yellow, red and purple Plums being brought to market. We were assured that Plums like Quetsche de Bâle, Berudje (or Béronge), and Méchelette can hold their own against the imports from Servia. There is, for example, the de Bacon, a tree which bears at an altitude of over 1000 feet, and has a disposition to naturalise itself by offshoots and seed like the Berudje; also there is the Baconette, with the synonym of Mirabelle Rouge, and Monsieur Rouge of proved robustness. Plums like Reine Claude, Mirabelle, and Monsieur hâtif are found profitable to grow on the plains and the hillsides even in the shade. Its fine foliage and the fact of its fruit demanding shelter makes the Apricot a suitable tree for cultivation near dwelling-places, where it is seen ornamenting the hotel yard and the villa approach. In certain gorges and slopes it is generally a fertile tree. As we follow the Rhône valley we note the fine Apricot orchards near Saxon-les-Bains, and the sale of the fruit is never at a standstill. Close to lakes, it is also favourably placed. We have only to mention the wild Grenadier at Sion, on the sunburnt slopes of the Tourbillon, immediately above which the eternal snows form an unexpected contrast. That decorative and most abundant bush, the Cognassier de Portugal, has its place in the orchard; it is at once useful and ornamental. The same valley is from Bex to Brigue crowned with forests of Chestnut trees. If the Chestnut is insufficient in quantity to supply the needs of consumers, France and Italy are at hand to make good the deficiency; whilst as regards nuts, domestic trade and commercial requirements are fed from the produce of the plains, the hillsides, and the mountain hollows, although the imported nut is no stranger. It would not be possible to fix the nomenclature of the dry fruit, as the seed does not reproduce the types. Nevertheless, the example of Dauphiné grafting the Walnut has already found imitators

in some of the Swiss cantons, where good late sorts are propagated, like Mayette, a dessert fruit: Chaberte, used in oil manufacture; and de la Saint Jean for the market.

As regards the smaller fruits, Gooseberries, Currants, and Raspberries, although scattered over the fields, vineyards, gardens, and orchards, the demands for the table, economic or domestic purposes, are not sufficient to make it a profitable industry. Our own good kinds of Gooseberry—Fertile, Versaillaise, and Holland—are found here, as well as some Currants and Raspberries. Not to speak of the glasshouse culture, which shows a tendency to expansion, the Grape is found not only on the garden trellis or espalier, but also in a high state of cultivation in vineyards on the shores of the lake of Geneva, at Montreux, Vevey, Clarens, Lausanne, and in the Valais, in the territory of cantons Neuchâtel and Fribourg. The Pineau Grape comes to the table under the names of Salraguin Klevez and Cortailloid. Our Chasselas Doré—called Fendant Roux and often Gut-Edel in the high Rhine valleys—has attractions for the wholesale dealer, of which the canton Vaud has had fruitful experience. Le Chasselas is the foundation of the Swiss white wines. La Valais sends out large quantities of the best Grapes in boxes, whilst retaining the smaller fry for the factory, which, as a certain outlet, has encouraged landowners and farmers to extend and improve the open-air and covered vineries. The canton Ticino, in the Piedmontese region, the fertility of the valleys in which is well known, exports by the lake of Lugano large quantities of wine and Grapes, to be used, as regards the former, in the manufacture of sparkling wines. The Vine is now gaining in importance in this comparatively warm country. Seconded by the action of the sun, the chalky nature of the soil is a stimulant to the fertility of the Muscats, Frankenthal, Lignan Blanc, Avarengo, Malvoisie, Gros Guillaume and other Vines producing Grapes of fine quality. The manufacture of the raw fruit into various preparations has made great progress in Switzerland, so that the grower has now in the factory an assured and profitable outlet for the fruits of his toil. The attitude of the federal and cantonal administrations is favourable to the establishment of factories and distilleries.

**Removing boiler.**—I should feel obliged by advice on the following subject: I have two small vineries (one to come on in July, the other in September), a small greenhouse in the centre, and the other side a small stove house, and an orchard house for Peaches in June, heated by about 650 feet of piping. I consume annually about eighty chaldrons of coke. This seems to me enormous, owing, I am led to believe, to the size of boiler which was originally placed there to heat, when built, four other small houses, two on either side. I contend that it would answer my purpose to remove the boiler and have a small one placed there to heat 700 feet of piping—A. A. W.

\* \* This is a rather awkward subject to advise on, especially seeing that "A. A. W." does not state what kind of boiler he has in use. It certainly seems wasteful, and a smaller one unless not equal to keeping up the heat without hard driving, would be the most economical. With large boilers much may be done towards economising fuel by a judicious use of fire dampers, but the boiler complained of evidently swallows up more fuel than ought to be necessary with the amount of piping to be heated. If "A. A. W." will describe his present boiler we will endeavour to advise him upon changes that may be desirable.—Ed.

## STOVE AND GREENHOUSE.

### STREPTOCARPI.

THOUGH the fine hybrid strain of *Streptocarpus* now in commerce has been distributed for some years, it is but rarely that one meets with a good batch of plants. This does not arise from any difficulties that their cultivation presents, for, given a suitable position, they are as easy to grow as the commonest of greenhouse plants, and certainly we have hardly any other plant that gives such a splendid return for the little trouble spent over them. Personally, I think that their introduction was one of the greatest boons ever given to the gardener who has not the command of much heat, as they flower continuously from May to September, and even later, in unheated greenhouses without giving the trouble of raising successional batches, and the delicate colouring and quaint tracery in their flowers are a continual source of pleasure to all who see them. I like best of all the

flowering scapes. As a cut flower used with delicate greenery they are delightful, and, once got into position, there are but few things more lasting, which is a great consideration to those who have much of this work to do.

### CULTIVATION.

My method of treatment differs in time of sowing from that generally recommended, as I prefer to sow in a cool house late in spring rather than in heat earlier in the year, for the latter method gives more trouble and more risk of losing the tiny plants in the early stages. Sown in carefully prepared seed pots with a inch or so of finely sifted loam and leaf mould freely mixed with sand, on the surface, and placed in a shady corner away from draught in a cool or temperate house, the seedlings come up quickly. They should never be allowed to get dry, and the seed-pot should be covered with a sheet of glass from which condensed moisture should be wiped daily. Damping off is more frequently the result of dryness below than of anything else. When the seedlings go



*Streptocarpus* plants four years old. From a photograph sent by Mr. Chas. Jones, Ote Hall Gardens, Burgess Hill, Sussex.

white grounds with blue or purple pencillings, but there are also many delicate self shades of heliotrope and light or dark purple that are very beautiful. One peculiarity I find is that it is the flowers of lightest shades that are borne on the tallest and finest scapes, and it is not uncommon to be able to cut scapes of the white grounds at least 10 inches high and with as many as twelve flowers and buds on a scape. The red and rose-coloured flowers are not so generally satisfactory, though they contain some beautiful varieties, but the percentage of plants which have to be discarded for poorness of colour or dwarfness of habit is higher among these shades than among the whites and purples. *S. Wendlandi* is rather an awkward type of plant, but it bears tall, many-flowered scapes of blue flowers that are very useful, and a new strain of hybrids between this and *S. Dunni* is likely to be much sought after. Hybridists are still busy among the *Streptocarpus*, so that nothing like finality has been reached, and we may look for plants of faultless habit combined with tall free-

big enough to handle they are pricked off in pans filled with equal parts of loam and leaf mould, and removed to a frame containing spent hot-bed where they are kept shaded all summer. A few of the strongest plants are potted off into 3-inch pots during the early autumn, but the majority are left in the pans all winter and wintered in a house that has a minimum temperature of 38° or 40°, keeping them fairly dry at the root till March, when they are potted into their flowering pots. The secret for this shift is similar to that recommended above except for the addition of about one quarter its bulk of finely broken and well decayed cow manure, and it is to the latter that I attribute the robust and healthy growth made by the plants. After potting, water must be given in gradually increasing quantities, but at no time must the soil be allowed to get sodden. To the position selected for the plants when growing and flowering I attach some importance and I never think they look well or do well when mixed with other flowering plants, though

do both when grown amongst Ferns. In own case they are grouped at the west of a tall lean-to house facing north, and on a bench which is covered with an or two of cocoa-nut fibre, and here they flower with the utmost profusion, the only attention they require being watering and occasional picking over to remove the seed-pods, which form quickly and weaken the plants if left on. The requisite conditions for well-being of the plants are a cool, moist room, freedom from draught, and plenty of light without direct sunshine; in fact, the conditions which make our Maiden-hair and other delicate Ferns look their happiest will do the same with the Streptocarpus. This spring, having many surplus plants on hand, I formed in order to the main path of a large house by lining on edge two 4-inch planks at 4 inches apart, filling up the intervening space with peat and loam, in which I put the surplus stock. Here the plants have done very well and provided quantities of flowers for cutting, besides adding greatly to the appearance of the house. The only insects which trouble Streptocarpus are green fly, white fly, and mealy bug; the two former may be easily dealt with by spraying with nicotine insecticides, but the latter if allowed to establish itself will surely kill the plants, as there are no successful means of getting rid of it from plants with woolly leaves and a close-growing habit. Given cool treatment throughout, however, mealy bug should not get a standing; the danger arises through raising the seedlings in a hothouse among other plants already infested with the pest.

The illustration shows three well-flowered examples grown by Mr. C. Jones, gardener to Mr. H. Woods, Ote Hall, Burgess Hill, Sussex. These plants were each four years old and measured 3½ feet across. They were in 10-inch pots, and at their best at the end of the month of June. There were then on them 150 more flowers than at the time the photograph was taken.  
J. C. TALLACK.

**Plumbago capensis.**—The remarks by "H." (122) on the treatment of this useful but much neglected plant, are well worth perusal, as showing the usefulness of it when grown in pots. As a pot plant my experience of it is but limited, but I have proved it to be a capital subject for covering trellises in conservatories and cool corridors, though, as "H." says, a little warmth suits it best. Planted in a fairly rich loamy compost it quickly covers a large space, and when in bloom in autumn its pale blue flowers are very attractive. I have a large plant on a conservatory wall, and each spring I cut it back to several eyes from the base, removing altogether the weaker growths. Soon breaks away again and the growths are allowed to fall down naturally.—GROWER.

**Calceolaria alba.**—What may be accomplished with this perfectly beautiful species as a pot plant was well shown at the Royal Horticultural Society, on Tuesday last, by a group of several plants in a circular basket, the importance of which may fairly be estimated by its receiving a first-class certificate. The species, a native of Chili, has been in cultivation for half a century or more, yet has been little known to gardeners generally. Several notices of this beautiful species, as also a coloured plate last year in THE GARDEN, have brought the plant more prominently into notice, and now Mr. J. T. Bennett-Poë, of Ceshunt (gardener, Mr. Downes), has proved its value both as a pot plant or cut flower. The perfectly grown plants shown by Mr. Poë were compact bushes laden with blossoms, these being borne on much-forked heads in considerable profusion. The elegant sub-shrubby character of the plant, with numerous linear leaves that are minutely serrated at the margin only, add beauty

to the plant, which, while nearly hardy, is not sufficiently so to render it of permanent worth in the garden. As a cool greenhouse plant, however, there is plenty of room for it, or even in beds in the open all the summer long.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

ONLY a very small number of exhibits were brought together on this occasion. The most conspicuous exhibits were a large group of Caladiums from Messrs. John Laing and Sons, Forest Hill, hardy plants from Messrs. Wallace, of Colechester, an extensive and very interesting collection of twenty dishes of Cob Nuts and Filberts from Messrs. Bunyard and Co., Maidstone, a large collection of fruit from the Dowager Lady Fricake, Fulwell Park, a group of hardy Heaths from Messrs. Veitch and Sons, and groups of Orchids from Messrs. Sander and Messrs. Veitch and Sons. From Sir Trevor Lawrence came an enormous spike of Grammatophyllum speciosum.

Orchid Committee.

A gold medal and first-class certificate were awarded to Sir T. Lawrence for

GRAMMATOPHYLLUM SPECIOSUM.—A gigantic form producing spikes upwards of 7 feet in length, and carrying upwards of sixty flowers, each about 6 inches across the sepals and petals by 1 inch in breadth, the ground colour being rich golden yellow, heavily spotted with rich brown; the lip pale yellow, lined and suffused with brown. Two flowers are produced at the base of the spike, which are not fertile; the ground colour greenish yellow, with darker brown markings. Although an old species, it is somewhat difficult to induce it to flower freely, only two instances of its having previously flowered in this country having been recorded, viz., with Messrs. Loddiges, of Hackney, in 1851, also with Mr. Farmer, of Cheam, in 1858.

Awards of merit were adjudged to the following:—

LELIO-CATTLEYA JUNO (C. Mossie x L. majalis).—The sepals and petals deep rose, suffused with a darker shade of colour, the lip rich purple, shading to yellow, lined with purple-brown at the base, the side lobes pale rose, shading to yellow. The flower is intermediate in character between the two species, but the habit of growth resembles C. Mossie. From Mr. N. E. Cookson, Wylam-on-Tyne.

LELIO-CATTLEYA ANDERIANA (bicolor x elegans).—The sepals and petals are nearly white, slightly suffused with rose at the base, the lip deep velvety crimson, with a white blotch and margin in front, the side lobes pale rose, shading to purple, lined with white at the base, the colour rose-purple, with a white blotch at the apex. The lip has the elongated character of C. bicolor. It is remarkably free-flowering; the plant exhibited carried four flowers on the spike. From Mr. R. J. Measures, Cambridge Lodge, Camberwell.

GOODYERA ROLLISSONI.—A lovely form, with deep velvety green and yellow foliage. It is remarkably free growing and a most desirable variety. From Mr. W. Bull, Chelsea.

Messrs. J. Veitch and Sons, King's Road, Chelsea, sent two fine forms of Cattleya Atalanta, a good form of C. intertexta (C. Warneri x C. Mossie), a large, bold-flowered variety with deep rose sepals and petals, the lip deep rose, veined and suffused with rich crimson-purple in the centre, shading to rich orange-yellow at the base; Lelio-Cattleya Nysa (L. crisa x C. Warszewiczii), a lovely form with pale rose sepals and petals, the lip rich crimson-purple, heavily fringed at the edges with light rose, the side lobes white, shading to rich yellow and deep crimson at the base; L. C. Parysatis (Boweringiana x pumila), intermediate in character between the two parents, with three flowers; Cypripedium Melanthus (Hookeri x

Stonei), a distinct form, the dorsal sepal pale green, suffused with yellow and lined with brown, the petals greenish yellow, lined and spotted with dark brown, the lip greenish yellow, suffused with brown; and C. Janet (Spicerianum x glanduliferum), taking a great deal of the characters of C. Spicerianum in form and colour, with the twisted characteristic of the other parent in the petals (silver medal). Messrs. F. Sander and Co. sent a small group consisting of Catacsetum Chrystianum, a distinct form with deep rich brown sepals and petals, the lip brown, mottled with green and heavily suffused with dark purple hairs at the margin; C. fimbriatum with ten flowers, Lelia amanda, Cattleya Gaskelliana virginialis, a nearly white form with a slight tint of rose in the centre of the lip; Lelio-Cattleya Robini Measures (parentage not recorded), the sepals and petals pale lemon-yellow, the lip yellow, suffused with rose-purple, with a deeper shade of yellow at the base; and L. C. Sanderiana, a variety very similar to one previously noted under the name of L. C. Elstead Gem.

Sir T. Lawrence sent a distinct species of Cymbidium with pale green sweetly-scented flowers, and Lelio-Cattleya Janet (C. intermedia violacea x L. pumila), a lovely form, with pale rose sepals and petals, lip crimson-purple in front, which extends round the margin of the side lobes, the latter rose, shading to yellow at the base.

Mrs. Briggs, Bury Bank House, Acerrington, sent Cypripedium Hereules (venustum x Stonei) with two flowers. Mr. R. J. Measures exhibited the rare Masdevallia Lowi, a most distinct variety, the sepals and petals white at the tips, spotted with purple, and shading to yellow at the base. The plant carried eleven spikes of flowers. Mr. C. J. Ingram sent a form of L. Dominiana, Lelio-Cattleya Ruby Gem (C. Lawrenceana x L. C. elegans), the sepals pale rose, petals rose, heavily suffused with a darker shade of colour; lip rich crimson-purple, shading to white in the throat; and Cypripedium gracile (Haynaldianum x Swavianum), a graceful form with three flowers.

Messrs. H. Low and Co. had Lelio-Cattleya Canhamiana, L. C. Aurora, and a fine form of Cypripedium Alfred Hollington with three flowers.

Floral Committee.

A first-class certificate was awarded to—

FICUS RADICANS VARIEGATA.—This is a very pleasing variety, dwarf and bushy in habit, with pretty mottled foliage, grey-green and white. It appears to be a strong grower, and is a highly attractive plant. From Mr. W. Bull.

Awards of merit went to the following:—

CACTUS DAHLIA AMBER.—The colour is very charming, being shades of bronzy yellow. The form is fairly good, the petals narrow and pointed, but not twisted, and the bloom is slightly inclined to be coarse. From Mr. J. Stredwick, Silver Hill Park, St. Leonards.

CACTUS DAHLIA NIGHT.—A very dark velvety maroon, of excellent form and a very taking colour. It is not unlike Matchless, but has a better centre. It should make a good exhibition bloom. From Mr. J. Stredwick.

POMPON DAHLIA HYPATIA.—This is a variety of good form, with a close, hard centre. The colour is quite distinct, being a pinkish terra-cotta, shading almost to bronze yellow at the centre. From Mr. C. Turner, Slough.

POMPON DAHLIA VESTA.—A shapely white; certainly an improvement in form on most of the existing whites, but spoiled by a defective centre. From Mr. Turner.

POMPON DAHLIA PIRYNE.—A pretty variety with yellow petals, shading to scarlet at the edges. The form is generally good, but the centres appear to be not quite reliable. From Mr. Turner.

SHOW DAHLIA MARJORIE.—A very pretty flower, amber-yellow, the older petals faintly tinged with pink. The form is good, but the centres slightly uneven. From Mr. Turner.

The principal exhibit in this section was a large group of Caladiums from Messrs. John Laing

and Sons. The plants were not generally of great size, but were in good condition, well grown and of brilliant colours. A few of the most striking plants were the charmingly variegated *C. E. Dahle*, *Michel Buchner*, a particularly handsome specimen of *Louis Van Houtte*, *Baron Adolphe de Rothschild*, *Princess of Teck*, *Flammant Rose*, a very bright variety; *Raymond Lemoine*, very fine, *P. Klein* and *Mrs. Laing*. From the same firm came also a very pretty group of *Crotons*, every plant in which was a model of symmetrical growth and all were well coloured (silver-gilt *Flora* medal). A nice group of plants, chiefly *Begonias* and ornamental foliage plants, was shown by *Mr. P. Purnell*, *Woodlands*, *Streatham Hill*. The arrangement was tasteful and effective (silver medal). *Mr. T. S. Ware*, of *Tottenham*, made a gorgeous show with a collection of *Dahlias*, containing pompons and *Cactus* and decorative varieties. Among the pompons the best bunches were *Eurydice*, *Tommy Keith*, *Mrs. W. Besant*, *Mars*, *Darkness*, *Lilian* and *Juliette*. The *Cactus* section contained good examples of *Valkyrie*, *Mrs. A. Beck*, *Matchless* and *John Welch* (silver medal). *Messrs. W. Wallace and Co.*, *Colchester*, staged a beautiful collection of *Liliums* and *Gladioli*, making a very brilliant bank of colour. Varieties of *Lilium speciosum* were well shown, also *L. auratum*, *L. Maximowiczii*, *L. Batemannii*, *L. tigrinum splendens* and *L. tigrinum flore-pleno* (silver medal). *Messrs. Veitch and Sons* had a very delightful exhibit, viz., a collection of hardy *Heaths*. The varieties shown were *Erica Mackayana*, *E. vulgaris variegata*, *E. v. aurea*, with very good foliage; *E. v. Hammondi*, a very strong-growing white form; *E. vulgaris fl. pl.*, a very lovely variety, free-flowering and of very sturdy growth, the colour also very charming; *E. cinerea alba*, *E. vulgaris Allporti*, a handsome variety of darker colour (silver medal). *Mr. W. Bull*, *King's Road*, *Chelsea*, sent plants of *Musa superba* and of *Ficus radicans variegata*.

A few new *Roses* were shown by *Messrs. Wm. Paul and Son*, *Waltham Cross*, viz., the new *Tea* *Empress Alexandra of Russia*, *Aurora*, a pretty pink bedding and decorative *Rose*; *Waltham Standard*, a new red *Hybrid Perpetual*; and *Queen Olga of Russia*, a new *Hybrid Tea*.

#### Fruit Committee.

An award of merit was given to

MELON FROGMORE SCARLET, a scarlet flesh fruit, large, oval, nicely netted, and of excellent quality. It is a cross between *Duchess* and the old *Beechwood*. Sent by *Mr. O. Thomas*, the *Royal Gardens*, *Frogmore*.

The exhibits before this committee were not numerous, but interesting. Fruit was shown well by *Messrs. Rivers*, *Bunyard*, *Elliot*, *Wythes* and *Rickwood*, and some excellent vegetables came from *Mr. Lawrence*. Some excellent *Grapes* were staged by *Mr. Elliot*, gardener to *Capt. Macdonald*, *Hurstide*, *West Molesey*, consisting of the varieties *Foster's Seedling*, *Madresfield Court* and *Gros Maroc* (silver *Knighthall* medal). The *Dowager Lady Freake* (gardener, *Mr. Rickwood*, *Fulwood Park*, *Twickenham*) sent thirty dishes of fruit, consisting of *Apples* and *Pears*, *Peaches*, *Plums*, *Nectarines*, *Currants* in variety, and *Black Hamburg Grapes*, with *Morello Cherries* (silver *Banksian* medal). *Mr. G. Wythes*, *Syon House*, *Brentford*, sent thirty *Melons*, the chief variety being *Middlesex Hero*. The fruits were beautifully netted. This kind was given an award in 1895. The same exhibitor sent a new seedling *Melon*, *Thames Bank*, but not ripe. *Mr. Willard*, *Holly Lodge Gardens*, *Highgate*, sent a new seedling *Melon*, a white flesh, but the fruit was not quite at its best—a promising kind. *Mr. McIndoe*, *Hutton Hall*, *Guisborough*, *Yorks*, sent a dish of *Japanese Plum Burbank*, a very prolific variety. *Messrs. Rivers and Sons*, *Sawbridgeworth*, sent black and white *Grapes*. *Graskiska* is a very sweet, refreshing *Grape*, not large, but good, amber-coloured berries and very free-bearing, and *Directeur Tisserand* is a blue berry, round and distinct. They also exhibited three boxes of *Plums* grown on pot trees—splendid

fruits, the varieties being *Late Transparent Gage*, *Golden Gage* and *Monarch*. These were given a cultural commendation. *Messrs. G. Bunyard and Co.*, *The Royal Nurseries*, *Maidstone*, exhibited twenty dishes of nuts—*Cob* and *Filberts*, very fine, and varieties worth special notice. The *Atlas Cob*, *Webb's Prize*, *Duke of Edinburgh*, *Pearson's Prolific*, red and white *Filberts*, the *Kent Filbert* and the purple-skinned *Filbert* were most noticeable for size and quantity, and the collection was most interesting.

Vegetables were well shown by *Mr. F. Robinson*, gardener to *Mr. V. Lawrence*, *Elstfield House*, *Hollingbourne*. There were very good exhibits of *Excelsior Onions*, *Standard-bearer Celery*, *Bunyard's Scarlet Perfection Carrot* and good *Student Parsnip*, *Potatoes* in variety, *Hill's Prize Runner Bean* (a nice dish), excellent *Cheltenham Green-top Beet*, *Sutton's No. 1 Cucumber*, *Walcheren Cauliflower*, and other good dishes (silver *Banksian* medal). A collection of *Cucumbers* (eighteen fruits) came from *Mr. W. Kemp*, *Barnes*, the variety being *Covent Garden Perfection*. *Mr. Corbet*, gardener to the *Marquis of Normanby*, *Mulgrave Castle*, sent seedling *Tomatoes Royal Sovereign* and *Mulgrave Castle*. Doubtless these will be tried at *Chiswick*.

The *Veitch* prizes for flavour in *Apples* were given, first, to *Mr. Wythes*, *Syon*, who had a dish of *Irish Peach*, and second, to *Mr. Herrin*, *Dropmore Gardens*, for *Lady Sudeley*. *Mr. Wythes* was given the second award for *Jargonelle Pears*, but by the rules the award was vetoed, as he had it on the previous occasion for the same fruit.

A most interesting lecture on *Plums* was given by *Mr. A. Pearson*, of *Chilwell*, *Notts*, who alluded to the value of the fruit on account of its hardiness and its freedom on a north aspect in moist soil and in exposed places. In noting new varieties he remarked what good kinds the *Messrs. Rivers* had given us, mostly from seed, but a few had been obtained from suckers. He dwelt on budding and grafting, the former being the most suitable, as trees treated thus were not so liable to canker. He described the varieties of stocks for the work, and advised a good dwarfing stock for these fruits. When the cuttings are needed for grafts they should not be in active growth, but nearly dormant. Many growers, on the other hand, took their cuttings direct from the trees. *Plums* should not be too closely pruned, and wall trees should be trained horizontally, not fan-trained, the shoots pinched when growing rather than pruning with the knife. Thinning the fruits was often neglected. It was important to do the thinning early. He gave instances of immense crops of fruits obtained by market growers in favourable localities, and noted the value of jam factories in the districts named, and used in this way the *Plum* gave a good return. For market, *Rivers' Early Prolific*, *Victoria*, *Kirke's*, and many others gave a splendid return when well grown and sent with care to preserve the bloom. For dessert, *Jefferson's*, *Early Transparent*, and *Green Gage* were doubtless the most profitable. There was a demand now for fruit for bottling. The smaller fruits were best for this purpose. He dwelt on the various kinds grown in the midlands and the various aspects needed for certain varieties. He mentioned that the *Prunes*, which did so well at *Mentmore*, did not succeed in many other places. There should be greater care in the gathering of these fruits and in selection for certain soils. He alluded to the *Japanese Burbank* shown that day and to other *Japanese* kinds. The chairman, *Mr. Bunyard*, added some excellent remarks on planting, grafting, and the value of the *Golden Gage*, *Pond's Seedling*, *Victoria*, and *Frogmore Prolific* *Danson* and other interesting matters connected with the culture of *Plums*.

**National Chrysanthemum Society.**—The members of the general committee of this society held a meeting on Monday evening last at *Anderton's Hotel*. *Mr. T. W. Sanders* occupied

the chair and was, considering the season of year, well supported by his brother officers and members. The business was mainly formal of a routine nature. A vote of condolence to the family of the late *Mr. R. Owen* was confirmed and the vacancy on the floral committee caused by his death was filled up by the appointment of *Mr. Gleeson* to the vacancy. A report was submitted as to the annual excursion, which was pronounced to be, as usual, a most successful affair. It was resolved that the society's medals awarded at the forthcoming September show should be the same way as at the other shows of the season. So far as miscellaneous exhibits are concerned, twenty-five new members were elected, and *Higham Hill* and *Barnstaple Chrysanthemum Societies* were admitted in affiliation.

#### THE NATIONAL CO-OPERATIVE FESTIVAL.

AUGUST 20 AND 21.

This festival, which brings into a common centre the leaders and members of the various co-operative societies in the country, extends throughout the week, the most interesting part of it being a large flower show which took place on Friday and Saturday of last week at the *Crystal Palace*. It has been the practice hitherto to hold the flower show in the nave of the building, but, as that occupied by the *Imperial Victorian Exhibition* huge tent was erected on the garden terrace, 500 yards in length by 40 feet in width, and this the various exhibits forming the flower show were staged, where they were seen to much greater advantage than in the building, where also they suffered much less from heat. It was not only a very extensive exhibition, but of general excellence.

On the first day the fruit grown under glass was staged, some good collections being placed upon the tables, the produce very largely of growers or well-known amateurs. Saturday brought the most interesting part of it, the produce mainly of the gardens of working men—self-taught growers, who have gained their knowledge by experience learned in the course of culture. A portion of the show came from all parts of the country, and comprised twenty-nine complete collections of vegetables, forming in the aggregate 174 dishes; of these, one entry came from *Scotland*, two from the midlands, three from the west of *England*, five from the north-west, eight from *London* and its suburbs, and ten from the south of *England*. The counties are grouped in eight different districts, so that the collection grown in a certain area compete by themselves and thus a favourable part of the country gain no advantage over one of a colder and less genial character. Saturday's display was made up of over 1000 entries; among them were 298 dishes of *Potatoes*, many of them of the high quality; of *Beans* there were 130 dishes, *Beet* seventy-eight, of *Cabbage* twenty-nine and of garden *Turnips* seventy-seven; but the particular vegetables, owing, it was said, mainly to the inclemency of the season, lacked their usual quality. Everything else was decidedly good. Of *Cauliflowers* there were few entries, as it is a season between the early types and the later autumn varieties; of *Celery* there were thirty dishes, some of it remarkably good; *Peas* were represented by sixty-four dishes, the *Duke of Albany* and *Autocrat* types being most in evidence; *Vegetable Marrows* by ninety-one. As it is not only an improvement in quality, but it is made quite clear that the range of varieties widens also; the best of each is what is sought and cultivated.

There were excellent plants also, many of them brought with great care from long distances. The finest specimens of *Ferns*, including some of the choicer *Maiden-hairs* and others, *Coleus*, *Begonias*, delightful pots of *Harrison's Musk*, admirable flowering *Begonias*, *Fuchsia*, *Lilies*, *Pelargoniums*, &c. *Annuals* grown in pots made a brave display, though many, no doubt

been taken up from the ground and placed in for the purpose. Pot plants numbered nearly but cut flowers reached to 637 entries, and most popular with these co-operators are Dah-Marigolds, Roses, Asters, Sweet Peas, Migotte, &c. The show, Cactus and Pompon was excellent, and African Marigolds very It was satisfactory to note that there were six entries made by working women and ty-nine by the children of artisans in the es set apart for them. All the time the show open to the public the tent was crowded with ors, who appeared to be deeply interested the exhibits. Perhaps no other exhibition of kind draws to it so much of human interest his one of co-operative products. It always acts an enormous crowd.

the Italian Court within the Palace could be an exhibition of photographs of "Gardens of taste," shown individually and also in collec- for, for which prizes are offered. Many of these sisted of workmen's town gardens, cottagers' country gardens, window gardens, floral porches, oery, hanging baskets, &c., ten classes in all, he professional photographers were invited to el collections of garden views and sylvan ces, and prizes were awarded for these also. My a useful hint was conveyed by these, as they represented what human hands had wrought ssisted Nature to display in the way of delight- subjects.

he principle of co-operation has undoubtedly ed largely into our social and industrial yems, never to get out of them again. Some of eading advocates may be deemed visionaries n their projects regarded as crude, but it does ar probable that, were the principle more ly introduced into industrial organisations, ay of the labour wars between employers and oyed might be prevented. This is a consum- nion devoutly to be wished, and if the results of his annual festival and flower show tend towards a tter understanding of labour and social ques- es, and a more cordial intercourse among rkers and their masters, then it is a movement h, if it does not command full adherence, may excite and draw to it the sympathies of the omunity.

## NOTES OF THE WEEK.

*Ladiolus brechleyensis*.—The bold spikes of his old garden plant have been singularly effective of late, and, in spite of many choice hybrid kinds, the bold scarlet of this well-known plant is as much admired as ever. A splendid plant for shrubby borders.

*Egonia Knowsleyana*.—For grouping freely in the conservatory this is a most pleasing variety, bearing its elegant white and rose-tinted blossoms in considerable numbers. So free indeed is its growth, that many useful branches could be secured when cut flowers are in request. In this the small sprays would be very charming for use.

*Lymphæa Marliacea ignea*.—This lovely hybrid is now flowering splendidly at Kew in the lately aquatic tank, its richly-coloured blossoms spading out in all directions. The colour is remarkable as well as pronounced—a shade of bright ro-crimson, inclining possibly to an intense hue whage. It bears a continued succession of glow- ing blossoms for weeks together, floating on the surface of the water, and is most valuable.

*Lymphæa tuberosa* var. *flavescens*.—This very pleasing variety, now flowering abundantly in the open water, where its large, pale creamy yellow blossoms are most attractive, and associated with the brighter tints of the more recent hybrids, the effect is indeed beautiful. The species is a native of North America and quite lately in British gardens, of easy culture, and readily increased by division of its tuberous roots when dormant.

*Antiana Andrewsii*.—For moist or very shady positions this is a capital plant in groups,

and of considerable value at this time in the bog garden, where so few things of its colour can be found. Where there is no bog garden the plant may be grown with perfect success in similar positions and soil to the Trilliums, Dentarias, *Cypripedium spectabile*, and such things. In a shady spot at the foot of the rockery the plant grew and flourished for some years in succession.

**Carnation Mrs. Tudway.**—I have sent you a plant of *Carnation Mrs. Tudway* for you to see its habit and constitution. It was layered in August, 1896, and planted out the following October. I planted out 300 and not one went off during the winter. I planted out 500 of the old Clove, and lost about 100 plants.—A. G. HOOKINGS, *The Gardens, Oldcorn House, Almondsbury*.

**Tufted Pansy Ardwell Gem.**—This old variety is just now flowering exceptionally well, and although there are several distinct acquisitions in yellow sorts in the newer varieties, this sort flowers consistently. Small pieces planted out in the spring have now attained to large proportions, the rich green creeping style of growth being literally covered with bloom. It is a pity that the constitution of some of the newer sorts is not equal to the variety under notice.—D. B.

**Chrysanthemum Bronze Bride.**—This is one of the first of the early-flowering pompons to flower this season. The colour in its early stages is a rich reddish bronze, and is especially effective when a few plants are grouped together. With age the blooms pass to a light bronze colour. A good feature in this plant is that when the flowering season is over the plant may be cut down, when new growths break away freely from the base, and these each give a number of blossoms of excellent form and colour. The height rarely exceeds 2 feet 6 inches.—D. B. C.

**Campanula garganica hirsuta.**—This is a pretty kind that flowers profusely during the summer months. The plant flowers when given a position not too hot or dry in the border or rock garden. Its trailing, tufted habit, however, is best suited to the latter position, where its masses of somewhat starry blue and white flowers are singularly effective and pretty. The typical species is also a valuable plant for the same reason, and not less so the pure white variety, which is not nearly so plentiful as it deserves to be, and difficult to obtain true to name.

**Nertera depressa.**—The pretty orange-scarlet berries of this plant are now approaching maturity, and among very dwarf subjects it is quite distinct and, for the time being, effective. Given frame protection for the winter and fresh potting in the early spring with returning growth, success may be assured. Potting should, however, be done some time before the inconspicuous little blossoms appear, and if divided at all the gardener should be lenient, or the set of berries will be meagre. When the plant is in flower, plenty of air should be given to encourage a free set of berries.

**Gentiana asclepiadea alba** (White Willow Gentian).—Some fine tufts of this graceful Gentian are now flowering abundantly in the rock garden at Kew. The position is a somewhat shady one, and here in the cool, uniform conditions thereby ensured the plant grows and blossoms freely. A mixture of the blue and white forms of this plant with graceful stems, that doubtless suggest its popular name, growing 2½ feet high, has a decidedly pretty effect in the rock garden or in any spot at once cool and shaded. The plant is at home there, and in deep moist soil of peat and loam luxuriates.

**Three stove climbers.**—I herewith send you a spray of three good stove climbers—*Schubertia grandiflora*, *Passiflora princeps*, and *Aristolochia elegans*. *Passiflora princeps* is growing in a 12-inch pot and has not been potted for four years, and we are seldom without plenty of flowers; there is now over fifty rhizomes on it. *Schubertia grandiflora* is very rarely seen, but it is one of the

best climbers to grow where plenty of white flowers are required; it will commence to flower early in the spring, and continue till very late in the autumn. A. G. HOOKINGS.

\* \* \* Handsome flowers, all well grown.—Ed.

**Lilium speciosum Melpomene.**—When freely grouped in the garden in partially shady places this is one of the most handsome, as also the most desirable and useful of all the forms of this section. Vigorous of growth, free and abundant, as well as reliable in flowering, it yields a grand profusion of its richly coloured blossoms. These latter are of great substance, the rich crimson hue that predominates being freely spotted with white, the margin of the petals being also lined with white. This very handsome Lily is now flowering freely, and is very conspicuous in a mass.

**Tufted Pansy Magie.**—This variety, sent out by Mr. S. Pye last year, is now at its best. The cooler and moister weather of the last fortnight has suited it. All through the season the flowers have been highly prized, as they were freely produced and are of a shade of colour somewhat new. The colour is a pleasing shade of rose, with a light suffusion of crimson in the centre and on the lower petal. The flowers are of large size and of circular form, with a very neat yellow eye. This variety has growth which is fairly dwarf and compact, and on this account should supersede that formerly much-prized sort, *William Niel*, for bedding.—D. B.

**Abelia rupestris.**—A charming and pretty rock shrub or wall plant of comparatively easy culture, and bearing a profusion of pale pink and white blossoms. Though by reason of its specific name it is called the Rock *Abelia*, it is very rarely indeed so employed, but, at the same time, a rather sheltered spot should be given it where the proximity of a large piece of rock would afford some protection. Flowering, too, quite late in summer, it would assist in keeping the rock garden more attractive, while the general effect of such beautiful things judiciously placed would prove a step in the right direction.

**Abutilon Golden Fleece.**—This variety has the merit of providing a rich profusion of blossoms of a beautiful golden tint and considerable size. During its period of flowering, which ranges from early in June to the end of October, or even later, the old-established examples produce many hundreds of flowers. As a greenhouse plant for the roof this variety has but few equals, and its flowering propensity appears endless. A capital idea of the value of the plant may be gathered from a good-sized example in one of the greenhouses at Kew. Where an abundance of useful flowers for small glass is required, this kind is worth some attention.

**Phygelius capensis.**—For a position fully exposed this distinct and useful autumn-flowering perennial cannot be regarded as absolutely hardy, and should be well mulched each year. At the same time it would be advisable to root some young plants for wintering in frames in the event of the old plant being killed by the frost. Freshly rooted plants are also more vigorous, and take to the soil readily when planted in good ground early in April. A few cuttings could be inserted as soon as procurable, and these, in sandy soil, root readily. Bright-coloured subjects such as this are always valued in late summer and autumn when the yellow-flowering composites appear to hold sway in the garden.

**Chrysanthemum Little Bob.**—This excellent old pompon is flowering well already this season, its charming little blossoms of bright crimson standing out conspicuously from among other varieties of the same flower. Although flowering so early in the season, it is not to be despised in the least, but rather should be more widely resorted to for planting in clumps in the hardy border, or in small beds by itself. The plant is dwarf and free growing, and rarely exceeds 18 inches in height. It is wrongly named in one or two instances in the trial of early-flowering *Chrysanthemums* at the Royal Horticultural Society, Chiswick, being

there described as *Scarlet Gem*, which is really synonymous with the variety under notice.—D. B. C.

**Tufted Pansy Britannia.**—So much has been written about the need of a really true blue tufted Pansy, that all interested in the distribution of a novelty of this description should welcome it. The colour is indeed a rich and deep shade of blue, and, like other Pansies of this shade of colour, the hot and trying weather of July and early August caused them to be anything but pretty. Now, however, this variety is simply superb, and may be considered a magnificent addition to these plants if a position can be given to it where partial shade can be secured, more especially during the hottest part of the day. The flowers are rather large, circular, and deeply veined. This variety is also fragrant. Free habit of growth characterises this sort.—C. A. H.

**Symphyantra pendula.**—A good summer plant for the rock garden, too rarely seen in anything approaching good condition. It is a plant easy to accommodate in a light, warm soil, and the small fragments that one sees occasionally must not be taken as representative of this species, which will reach a diameter of 2 feet, or even 3 feet, when well grown. Thus seen, it is very attractive either as a front row border plant or on an easy slope in good soil in the rock garden. The large pendent blossoms are creamy white and nearly 3 inches long. A good plan is to raise a few seedlings and plant out at 6 inches apart, with the object of forming a goodly-sized patch. At Kew just now the plant is in fine form in the hardy plant department.—E. J.

**Sea Lavenders.**—So many persons now use the bloom of *Gypsophila paniculata* for vase decoration, and use it so commonly also, that already some occasional and yet pleasing substitute for it is asked for. Nothing I know of furnishes that substitute so pleasingly and abundantly as do the *Statice*s. When clumps of these hardy plants are established, and they do remarkably well on mounds or rockwork, they give great clusters of beautiful small bluish flowers in large racemes. Not only may these be used with exceeding grace with other flowers, for the bluish tints are almost neutral, but gathered now and stood in vases without water they keep bright for months, as *Everlasting Flowers* do. Everyone who wants such things should get plants of *incana*, *latifolia* and *Lemoniana*, for they are all good.—A. D.

**Spiræa Anthony Waterer.**—Those who have *Spiræa Bumaldi* should also secure plants of this rich, deep crimson-carmine flowered variety. It is well worth pointing out that where a few plants are grown, one or two pinched back in the summer induce later bloom, and that is valuable, especially where rich colour is desired in cut flowers. Small clusters of bloom cut well and are very effective. As these *Spiræa*s are shrubby and very hardy they are easily grown, as are any other deciduous shrubs, but they are naturally dwarf. They like a semi-peaty soil, that being indeed the natural character of the Knaphill soil where these shrubs thrive so well. A few plants put out thinly into a bed, various *Lilium*s being planted between, or clusters of *Hyacinthus candidus*, give very pleasing garden decoration with very little trouble.—A. D.

**Tufted Pansies.**—I have but just seen the large collection of these growing at Long Ditton, where during the season comparatively little rain has fallen. The plants were small ones put out in the spring, and the majority have now grown into masses. The following few I noted as remarkably effective, not only in colour, but having done wonderfully well, forming dense masses of leafage and bloom: *Nellie*, rayless, pure white; *Primrose Dame*, pale lemon; *Lord Elcho*, rich yellow; *Florizel*, bluish-lilac, a marvellous mass of a lovely hue; *William Haig*, colour of *Archie Grant*, but flowers of better form, a beautiful variety; *Blue Gown*, pale blue, and *True Blue*, a rich blue. All these seem to make first-rate masses and are singularly effective. It is only by seeing these plants thus grown that their

suitability for massing can be accurately determined.—A. D.

**Perennial Sunflowers.**—It is one of the misfortunes of these hardy plants that they increase too rapidly. If not kept in check they become a positive nuisance, apart from which they grow so tall and bloom so profusely that but a few plants in a garden seem unduly to dominate everything else, and yellow prevails everywhere. How much is this the case where largely grown it is easy to realise just now. It would be a good thing if all the tall, coarse, weedy growers were at once destroyed, and one-half the stock of all others also, as nothing tends so much to depopularise any family of plants as their too all pervadence. Perennial *Aster*s, with their generally blue tints and many so tall, are fast getting into the same category. Unfortunately these are things which diseases seldom trouble. They survive, not because the fittest, but because so robust, elbowing myriads of better things into obscurity.—A. D.

**Rudbeckia laciniata Golden Glow.**—Though this plant obtained the award of merit at a recent meeting of the Royal Horticultural Society, the flowers presented were scarcely as meritorious as one could wish either in colour or form; in both of these it seems inferior to the more freely cultivated *Sunflowers*. Whether the plant is as yet hardly established in gardens or not is not quite clear, though so far as English gardens in the south are concerned, the plant would appear the reverse of happy. Members of its genus are usually quick at establishing themselves in our gardens, and unless this one improves in the coming year we shall be inclined to regard it as an over-rated plant. Of a dozen or more blossoms in the Drill Hall recently only two were passably good, which, seeing these emanated from widely removed growers of hardy plants, does not speak much in its favour. We trust so distinct a variety will eventually prove a success.

**Cobæa scandens.**—A short time back an excellent photograph appeared in *THE GARDEN* showing a porch clothed with *Cobæa scandens*, and a note was appended thereto explaining how easily and quickly such clothing could be effected with this climber. I have been using it this year to cover some wires at the back of a cold house, and the growth made was so rapid that I was induced to take one or two measurements to verify the above statement. The seed, it may be noted, was sown singly early in February in small pots, the latter being plunged in a bed of leaves giving out a gentle warmth. The place being hardly ready when the young plants had filled the small pots with roots, a shift was given into 5-inch pots, and they were planted the first week in May. On August 2 the leading shoot of one of the plants had attained a length of 30 feet, and the superficial area covered by the same plant is 120 square feet. Naturally, a little trouble has been taken in the way of training and tying, but not very much, and I think the case affords an apt illustration of the ease and rapidity with which bare places can be clothed with this very quick-growing climber.—E. BURRELL.

**Hailstorm at Acton, Gunnersbury, and neighbourhood.**—On Wednesday last (August 25) about noon a terrific hailstorm burst over this immediate neighbourhood, accompanied with heavy peals of thunder and most vivid lightning. The damage done in Acton is most grievous to witness, more especially amongst the many market florists of the district. A hurried visit paid to Mr. Humby's nursery in the Mill Hill Road revealed such a destruction amongst growing plants still standing outside and in broken glass as could scarcely be credited were it not seen. A large number of *Chrysanthemum*s, which in the morning were the picture of health, were broken down, other things also suffering extensively. When seen six hours after the storm had burst, hailstones by the barrowload could be gathered up, many of these as measured then being fully an inch in diameter. In this district, too, there are many very pretty villa gardens which are com-

pletely denuded of their flowers and the foliage completely riddled. The foliage of the trees, also stripped off so as to cover the ground quite thickly, some trees being almost bare. Of nurseries besides that quoted have also suffered, notably Mr. Pike's, the *Carnation grower*. At Gunnersbury the damage is not nearly so apparent. I am glad to say; the hailstones here ranged to the size of nuts. Of these there was an enormous quantity. In all probability we shall see more signs of the injury to growing crops in a few days' time. The *Aucuba* shoots sent are from villa garden in Acton.—J. HUDSON.

**Seedling Verbenas.**—When but a few days since I was looking over the beds of seed-raised *Verbenas* in Messrs. Sutton and Sons' nursery, Reading, I could but remember the exceed trouble involved in the propagation of many *Verbenas* half a century since, when these plants constituted so important a factor in the sum of bedding arrangements of that date. What trouble was involved in procuring proper shoots, make cuttings, and even then how difficult to induce them to strike if wiry, and how ready they damped off if too young and sappy. Certainly it was wisest to keep stock plants in all the summer, and these, wintered in a cold house, provided mildew was kept at bay, would furnish very good cuttings to root in the spring in heat. Yet what a large amount of trouble was involved. Now things are, indeed, changed, by purchasing a packet of mixed seed, if a mixed bed of *Verbenas* be desired, or getting seed packets of distinct colours, if preferred, it is easy to obtain in that way beautiful varieties that long way exceed in quality and colouring the best named varieties of half a century since. There were blues in Messrs. Sutton's beds that almost vie with the hue of *Salvia patens*, rich were they, and as to blooming power were wonderful. So also the scarlets, so fine yet from seed so alike. Then there were whites, roses, maroons, and other colours, all charming as to indeed make one wish for a garden in which to grow from seed these lovely things. How one sees in such plants, in *Petunias*, *Lobelias*, *Phlox Drummondii*, *Stocks*, *Asters*, *Margolds*, and dozens of diverse things, a summer floral wealth, and all obtained by mere sowing of a few packets of seed.—A. D.

**The weather in West Herts.**—The weather of the past week has again been about seasonal in temperature. The days were cool for the time of year, while the nights, on the other hand, were mostly warm. The ground temperatures had fallen, but are still slightly above the average both at 2 feet and 1 foot deep. Rain fell on every day but one during the week, the total amounting to nearly 1½ inches. There occurred very heavy downpour shortly before 7 o'clock the morning of the 25th, when for ten minutes rain was falling at the mean rate of over an inch an hour. On each of the last five days some water has come through both the percolation gauges. Previous to this no water at all had come through either gauge for three weeks; no measurable quantity for nearly six weeks. The winds were, as a rule, rather high, the direct again being some point of the compass between south and west.—E. M., *Berkhamsted*.

#### BOOK RECEIVED.

"Report on the Phenological Observations 1896." By Edward Mawley, F.R.H.S.

**Rosa biflora officinalis.**—Will "C. L." say where this can be obtained?

**Names of fruit.**—W.—1, Yorkshire Green; 2, Roundway Magnum Bonum; 3, Cellini probably; 4, please send again; 5, Cox's Orange Pippin; 6, W. Calville.

**Names of plants.**—H. O. W.—*Virginian* *Phytolacca decandra*.—W. Harding.—*Brachyphyllum calycinum*.—C. Stewart.—1, *Pavia macrostachya*; 2, *Gleditschia triacanthos*; 3, *Viburnum Lantana*; 4, *Arbutus Menziesii*.

# THE GARDEN.

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## FERNS.

### TODEAS AT FRENCHAY.

ARRANGED in a low lean-to house at Malmaison, Frenchay, near Bristol, is a capital collection of these charming Filmy Ferns. They were collected personally by Captain Belfield, the present owner, many years ago in New Zealand, and a healthier, more thriving lot of plants could be difficult to find. They are principally two species—*T. superba* and *T. pellucida*, the last-named lovely kind being represented by many immense specimens, one of which is over 7 feet across. The age of the plant is shown by the large root-stock, which on the large plant is several feet in circumference, and the leaves are beautifully fresh and green. The house is an annexe to a large temperate fernery, and is, of course, entered from here only; consequently drying wind never reaches it, while the aspect and the heavy shading used combine to keep up that cool, moist atmosphere in which all these Ferns thrive. A winding path runs the entire length of the house, and the large leaves of the *Todeas* look remarkably well in prominent positions upon the rockwork, with which the house is lined on each side. The plants are evidently in good hands, and what is even more important, in a house that suits them well. Mr. Rye says it is not unusual to enter to find the fronds covered with hoar-frost, but presumably, owing to the damp atmosphere and the fact of the surface of the fronds never being dry, no harm results.

**Davallia fijiensis.**—A nice specimen of this fern is very ornamental, and such an one I noted recently at Malmaison. The finely divided fronds grow about 18 inches high, and are broad and deeply arched, the hairy rhizomes having a very quaint appearance. *D. fijiensis* is not a difficult fern to cultivate, and is much more elegant than the common Hare's-foot (*D. canariensis*). Like all the *Davallias*, it dislikes a close or heavy root-pan, but delights in rambling about over rough masses of cork or charcoal. It is suitable for

hanging baskets or for suspending on large cork blocks, such as are often used for *Platycerium alcicorne*. If grown in pans these must be well drained, and the rhizomes planted in a compost consisting of rough lumps of peat and loam, with charcoal and small crocks liberally added. A moist atmosphere is congenial to its growth, the plants thriving well in a shady position in the stove.—R.

### SUBSTITUTES FOR WATERING IN DRY SEASONS.

THE best substitute for watering in a dry season is a deeper and better working of the land with more manure or compost. In a dry season artificials are of no use, simply because without moisture the plants cannot take them up. A plant with its root confined must of necessity suffer from drought if its wants are not supplied, but placed out in the open, and the ground well broken and exposed and, if possible, manured, the watering-pot, except in special cases, such as transplanting, or special crops such as Celery, which is to a certain extent a marsh plant, need not be so much used even in dry weather. Mulching is a substitute for watering and is only second in importance to the deepening of the root-runs. When mulching is mentioned it is commonly understood that a covering of manure is placed over the roots on the surface of the soil, but where manure or compost cannot be had, an inch or two of loose soil, though it does not afford the nutriment which manure gives, has pretty much the same effect in checking evaporation and keeping out the intense heat. A hard baked surface cracks, and the moisture issues out of the fissures in the shape of vapour, but a loose surface prevents cracking, and so the moisture remains in the land, and is added to by what is known as capillary attraction. And this explains how the crops on a freely stirred soil flourish whilst others on hard baked land fail. Then the loose friable surface being in an absorbent condition to a certain extent gains fertility from the at-

mosphere. During all the late drought where the hoe has been run through the surface often—and the oftener the better in reason—the plants have attained their full development without a drop of water. The sunshine is the most glorious gift the cultivator of the soil receives, and if it does harm it is because the matter is not properly grasped, and the right measures for its utilisation taken. E. H.

## CHRYSANTHEMUMS.

### EARLY-FLOWERING VARIETIES.

THE first to bloom is *M. G. Grunerwald*, the plants of which have been a mass of colour for some time in the open border. It is of a pink shade, but varies, some of the blooms fading to a bluish-white. This is very free flowering. *Mme. Marie Masse* has flowers of a better colour than *M. Grunerwald* and more bushy growth. I think it an excellent early kind. In whites there is little to choose between *Mme. Desgrange* and *Lady Fitzwygram*. Perhaps the latter is the purer white out of doors, but both of them require the shelter of glass to bring the colour out free from a yellow tinge. *Flora* is a very showy border sort. Its yellow blooms are bright, and the small flowers are borne in great freedom, so as to become a fine mass. *G. Wernig* is also a capital yellow. *M. Dupuis* is good in the bronze shade. Taking the habit of the plant, with its free-flowering qualities and its earliness, it is one of a very few really useful early kinds. Notwithstanding the large number of new varieties that have been brought into cultivation, the choice of sorts worth growing is extremely limited. *Sam Barlow*, a salmon-pink flower, is a useful kind. *Mlle. Eulalie Morel* is of a somewhat similar shade and very good, but it blooms rather late in September. A good early red is wanted. *Roi des Precocees*, the best, is a bit late; so, too, is *Harvest Home*. The last-named is rather a tall grower. Except *Flora*, the sorts named are Japanese Chrysanthemums. This variety is a pompon. Others with a wealth of small blossoms useful as border varieties are *Blushing Bride* and

Bronze Bride. These are very free: La Petite Marie, a dwarf-growing white; Little Bob, crimson-brown; Mignon, yellow; Piercy's Seedling, a capital bronze.

Ryecroft Glory is a valuable early variety, but seldom flowers outside before frost sets in. It is, however, first rate as a pot plant. The growth is naturally bushy, and quite massive specimens may be obtained in small pots. The flowers are rich deep yellow under glass. For the various purposes for which plants are used in decorations this *Chrysanthemum* should be grown in quantity. Emily Silsbury may be called a white companion to the above. The blooms are larger and more ragged. The habit is not so bushy, but it is equally free flowering. It is likely to become popular as an early kind for pot culture.

H. S.

#### RIPENED WOOD AND THE BUDS.

I HAVE had several opportunities lately of noting the difference between the flower-buds on soft growth and those on stems that are thoroughly ripened by exposure. From the latter the flower-buds seem to be thrown up, as it were, by the solid force behind them, right away from the foliage. The peduncles are stout and the buds clean, sure indications of gigantic blooms to follow. By the time these burst into colour this leaves immediately below them will be large, firm and leather-like in substance. The flower-buds at the points of sappy growth appear limp and unkindly. Many have a tendency to remain stationary, as if the vigour of the plant is wasted in leaves. The foliage in an opposite direction to that of well-ripened wood is smaller as the tips of the shoots are reached. Such growth will certainly not produce the desired solid well-formed bloom. Over-feeding in the early or growing stages of the plant's growth is a cause of this sappy wood; also being stood too closely together or otherwise coddled in a shady situation. Anyone is able to grow *Chrysanthemums* up to midsummer, but it is after that period the test of good culture comes in. I have seen an instance in which the variety *Mme. Carnot* has stems now 9 feet high. These plants have been fed with stimulating manures, as well as growing in rich soil, the whole summer, and although they are large, abundant, and of a fine healthy green, I shall be surprised if the blossoms are at all satisfactory. The stems carry the leaves too far apart, and the growth is much too soft to produce any other than flat ungainly flowers. If plants have been exposed to the full rays of the summer sun, firmly potted and not stimulated with manures, they respond in a remarkable manner to the showery weather which generally prevails in early September. It is then we may assist, by top-dressing and otherwise, the developing buds. A weekly dose of some approved fertiliser will work wonders by bringing the roots to the surface. But use these aids in weak rather than strong applications each time. Most that I have favoured, such as *Ichthemic* and *Thomson's*, may be sprinkled on the surface in the proportion of a tablespoonful to a 10-inch pot. The safer plan, however, is to mix an equal quantity of sifted earth and then put it on in the above quantity. Guano, soot, and sulphate of ammonia or nitrate of soda are best used in the liquid state, but the latter require very great care. I would not use them at greater strength than half an ounce to two gallons of water. They are quick in action and cause the buds to push up fast, and have also the virtue of adding brilliancy to colours in flowers.

**HOUSING THE PLANTS.**—The proper time to put *Chrysanthemum* plants under glass is when there is danger from frosts, or as soon as the flower-buds burst and the florets show colour. Subject to these conditions, they are best outside, because no indoor treatment we can give is so favourable to the swelling buds as are the natural dews. I have attempted to hasten the bud development by placing backward plants under glass, but believe that such treatment really retards them. The moment colour is seen in the blossoms there is no better means of preventing decay of the early florets than keeping them quite free from

moisture. It is well, therefore, to have a greenhouse ready to shelter these early blooms as they advance, but allow the bulk to remain out some time longer. The end of September is a good general time for housing *Chrysanthemums*, for rarely does frost occur before that date—at least, enough to do harm. Taking the plants under cover gives us an opportunity to thoroughly clean them. The pots may be washed and decayed leaves removed. Those that have a touch of mildew on the leaves may be dusted with sulphur. Oftentimes green-fly is lurking on the under sides of the foliage, to spread in great numbers when under glass. A dusting of tobacco powder will destroy this. Keep the greenhouse airy and cool as possible by throwing open every ventilator, and for a few days let the roots be on the dry side. This will get the plants accustomed to their new conditions.

H. S.

**Chrysanthemum Thistle.**—For those who need light elegant varieties of *Chrysanthemums* for cutting, Thistle is most useful. It certainly is not one of the most showy of its class, "small Japanese," but its extreme lightness in a great measure atones for this. Of a lemon shade, it makes a pretty vase arranged with a little greenery. I find, however, that to grow it well a lightish, open soil and extra well drained pots are necessary. Last year my plants were grown in such a medium and gave satisfaction, flowering well. This year a heavier loam was used, and although suiting the general run of varieties, Thistle does not seem at home in it, the foliage presenting a somewhat sickly appearance and growth being slow. Care will be used in watering to give them every chance of recovering, but I am not at all sanguine of that, and shall in future use a light soil.—C. C. H.

**Early Chrysanthemums in a vase.**—With the advent of September the early *Chrysanthemums* come into blossom space. The handsome flowers of the *Mme. C. Desgrange* type are, during this season, generally at their best, and these flowers, if cut with long stems, are invaluable for decoration where an arrangement of an artistic kind is wanted combined with blossoms showing the highest cultural skill. What is prettier and richer in appearance than a vase containing nine to twelve large flowers of the light yellow *Mrs. Burrell*, or the deeper shade of the same colour as seen in *G. Wernig* and *Mrs. Hawkins*? Let either of these sorts be arranged by itself, and the rich green foliage of the plant is all that is needed for the embellishment of the vase. Those desiring still further enrichment, and a more striking finish, may obtain it by using a few fronds of the feathery *Asparagus plumosus*, these to overhang the side of the vase. The chaste white flowers of *Mme. C. Desgrange* answer the same purpose and make a magnificent decoration for the drawing-room or hall. A few sprigs of *Prunus Pissardi* or any purple-coloured foliage make a pretty contrast and a welcome change. In this case, too, *Asparagus* foliage may be used, but only those of the lightest shade of green. The one essential in these simple arrangements is never to crowd the flowers together. A really handsome vase may be arranged with just a few flowers, each blossom standing out quite distinct from its neighbour, so that all its good points may be seen. A batch of plants should always be grown for this purpose.—D. B. C.

**Azalea indica.**—Formerly there were few gardeners who did not stand their *Azaleas* out of doors in autumn with a view to securing a thorough maturity of the new wood, and doubtless the idea was a correct one, though in more places than not now-a-days one sees the plants left in the greenhouse all the year round. Of course by non-removal much labour is saved, and the fine display of bloom to be seen in the large nursery houses each spring is ample proof that the open-air treatment may be dispensed with, providing abundance of air is given night and day. Feed-

ing *Azaleas* would years ago have been looked upon with suspicion, but many now make a rule feed either with very weak farmyard liquid, or sprinkling some approved fertiliser on the surface of the pot and watering it home, and a marked difference is soon perceptible both in the vigour and colour of the new growth as compared with plants that have no stimulants given them.—J.

## PUBLIC GARDENS.

### ROSES IN PUBLIC PARKS.

I AM aware it requires a certain amount of courage to advocate the more extensive employment of *Roses* for decorating the public parks of our large cities, but I think the time has arrived when something should be done towards removing the reproaches often heard at the apparent neglect of our national flower in these places; and when we consider the immense popularity which the *Rose* has attained in our country, it is surprising that no attempt is made to use it more extensively. I daresay the vitiated air will be one excuse for this neglect, but I am firmly convinced that *Roses* could be grown in the parks from June to September without fear of permanent injury to the plants. It is a well known fact that shrubs having shiny foliage resist to a great extent the impurities floating in the air, and in the China, Tea-scented, and Hybrid Tea-scented *Roses* this style of foliage is very common. Although *Finsbury Park* is situated amid healthier surroundings than many of its rivals, it has, nevertheless, to contend with many disadvantages compared to country gardens, yet Mr. Melville has successfully employed the *China Roses* as bedding plants, and in beautiful they appear when massed in this way. If, therefore, the *Chinas* can be so used, why not the more refined *Teas* and *Hybrid Teas*? As the season is fast approaching when the matter should be taken in hand, perhaps a few ideas on this subject will be admissible.

In the first place, I would suggest that the plants to be used should be grown in pots somewhat expensive method, but I think the extra expense will be more than saved in the end, as I am persuaded that plants so grown for part of the year in a purer air would well repay any extra trouble taken to produce them. Old year-old plants from the open ground should be procured, of the freest-flowering and sturdiest of the *Tea*, *Hybrid Tea*, *China*, *Hybrid Perpetua*, *Polyantha*, *Bourbon*, and *Rugosa* classes. In potting of these should be commenced early in October. As it would be absolutely essential that these plants to be grown in a pure air, my suggestion is that the park authorities should rent or buy a plot of land right away in the country where land is cheap and the air pure. Eight-inch pots would be the best size in which to put the plants the first year, and the compost should consist of good unsifted fibrous loam, with some artificial manure of a lasting nature, and little charcoal dust added. After potting, stand the plants in the open upon a bed of ash until about November. They should then be plunged over their rims in coal ashes in a cold frame, taking care to keep lights night and day until the sharp frosts come. About the commencement of March the plants should be sparingly pruned, still keeping them in the pits and preventing injury from severe frosts. *Roses* in this dormant state will stand few degrees of frost. Keep the plants dry after pruning, and when young growths are about 2 inches long give a good soaking. We come now to a very critical time with them. In the forward state a few degrees of frost will cripple the first blossoms; therefore put on the lights every night. If the plants are injured to the hardy treatment they should be good, sound healthy plants by the end of May, with a quantity of flower-buds showing. These plants can then be taken from their country home, and

edded out in prominent and sunny positions in the parks. If these beds were previously well drained and filled with good fibrous loam, with some well-decayed cow manure added, the plants would quickly lay hold of this, and the result would be some splendid sucker-like growths owned with grand trusses of flowers.

As to the style of plant to employ, little need be said. To the clever superintendents, styles and methods will speedily present themselves, and if the dwarf or bush form, or the pyramidal pillar form be employed, they may be made very attractive. We are far behind our Continental and American friends in this matter. Certainly our climate is better than ours in many respects, but I should imagine that all large cities have the usual amount of injurious air to contend with, and it is no uncommon circumstance to meet with plantations of Roses in the parks and gardens of continental cities and those of the States. I am not aware that they remove their plants in the autumn, but, in my opinion, for London and cities of lesser magnitude, the practice would be decidedly beneficial, if more costly. The advantages would predominate, for the beds filled with the Roses in summer could be rendered interesting in winter and spring by bedding out small cineraria and bulbs. Roses grown in the manner suggested would be available for this treatment for several years, and a larger pot for them, as they required it, would be an item of small consideration in such establishments. Just imagine what a bed would be like containing, say, 50 to 100 plants each of such lovely Roses as La Francee, Augustine Guinoisseau, Camoens, Marie Vanhoutte, Caroline Testout, Captain Christy, Mrs. J. J. Grant, Viscountess Folkestone, Gloire des Olyanthis, Mme. Laurette Messimy, Souvenir de la Malmaison, Marquise de Salisbury, Mme. Ernest-Ducher, Anna Ollivier, Mme. Hoste, Souvenir du President Carnot, Grand Due de Luxembourg, Enchantress, Mme. Abel Chatenay, Mme. Bruant and such-like kinds. They combine usefulness of habit, fragrance, and, indeed, all the qualities that one looks for in a decorative ant. I gladly broach this subject for the consideration of responsible authorities, and trust they will give the matter the attention it deserves. I feel sure that it only requires a careful consideration of the advantages to be derived by the more intensive use of these lovely Roses to ensure complete success.

PHILOMEL.

## KITCHEN GARDEN.

### NOTES ON VEGETABLES.

ALTHOUGH far from being the most attractive element in gardening, there is no part of it that of greater importance than is vegetable culture. We have learned to more fully estimate their value as healthful food, and in the doing have also in a remarkable degree improved them as both food and garden products. Good gardeners have now learned also to find in vegetable culture much that is at once very interesting and pleasurable. This gratification is largely been induced by the beauty as well as high quality found in vegetables to-day, and they compare surprisingly to their advantage with the vegetables of but 30 to 40 years ago. Apart from their domestic value as food, vegetables have become most important market subjects also, and myriads of persons find in their growth means to a prosperous livelihood. The range of vegetables, too, is exceedingly wide. Literally they serve to satisfy all tastes, and those whose pleasure is found in profitable gardening, whether for a livelihood or for recreation, derive from their products pleasure from which the ordinary consumer of market vegetables is debarred, seeing that the former is always command greater variety, the best kinds, exceeding freshness, and the satisfaction of consuming one's own products, which,

too, is of great value, as well as adding much to the pleasure incidental to their consumption. The amateur's chief trouble, perhaps, in seeking to make from seedmen's lists suitable selections is found in the multiplicity of varieties which in these lists abound, varieties that are added to each year. On the other hand, the gardener finds very much of interest, amounting almost to excitement, each year if he obtains but a few diverse sorts, and by growing a variety of each kind of vegetable each year eventually succeeds in securing the very best to suit his requirements. Whilst main crops should always be of well-established varieties, trial rows of newer ones prove to be useful and instructive. Everyone who gardens, no matter whether amateur or professional, has to learn at the outset certain fundamental principles of culture. Soil must not be shallow, but deeply worked, and this is done by trenching. In that way roots run deep, and find moisture from which in shallow-worked soil they are excluded. Then the soil, which is, after all, but a store or larder, must be amply furnished with plant food in the form of various manures, and although repletion is as wasteful to plants as to animals, yet plants know better than animals do what is good for them, and take up only what they need. Still, this may be done too grossly, and therefore the best average results come from deep trenching, allied to moderate manuring, yearly performed. But manures vary very much, as these are useful in proportion as they contain phosphate, potash, and nitrogen, the primary constituents of plant life. Any manure, so-called, in which these elements are absent is practically worthless. This fact shows that soil may be amply manured in a way, yet be half starved. Fairly fresh animal manures, non-fermented, and artificial manures of guaranteed quality are best for all purposes. When seasons are dry, however, these manures applied in liquid form are the most acceptable to plants, as all roots absorb food only through minute root hairs, and these can absorb only in liquid form. Hence, again, the importance of watering crops freely in dry weather, for when the soil is very dry, even if there be ample manure in the soil, if water be not present to divert the mineral elements, plants cannot utilise them. Plants of nearly all descriptions, but vegetables especially, being quick growers, need ample water as well as plant food. These facts serve to show that the primary needs of vegetable culture are deeply worked soil, ample plant food, and abundant moisture to enable plants to utilise that food. The primary vegetables grown in gardens are, of roots, Carrots, Beet, and Parsnips, all tapering ones and long keeping, and round or bulbous roots, such as Turnip-rooted Beet, Turnips, and Onions, and of tuberous roots, Potatoes, Jerusalem and Chinese Artichokes. Of fruit-bearing ones we have Peas, dwarf and runner Beans, and Broad Beans, Tomatoes, Cucumbers, and Vegetable Marrows. Of stem plants, usually blanched to render them tender and edible, Leeks, Celery, Asparagus, Seakale, and even Mushrooms, whilst of leaf or heart plants we have Cabbages, Kales, Savoys, Brussels Sprouts, Broccoli, Cauliflowers, Spinach, &c., and Lettuce and Endive of salads. Beyond these there are numerous lesser ones in great variety, so that even of kinds, apart from varieties of each, the range or selection is great. Herbs, too, are useful products not to be overlooked. In the good culture of all these things there is found an enjoyment and satisfaction no other form of recreation furnishes.

D.

**Peas and green fly.**—I can confirm the statement made by your correspondent as to tall Peas

escaping the green fly this season. I have grown this year for the first time Chelsonian. It is a Pea advertised to grow 6 feet or 7 feet high, and I have no doubt that in an ordinary season it would even exceed that height. Other well-known dwaffer varieties, such as Satisfaction, Rentpayer, and Maincrop, were badly infested with fly, but Chelsonian entirely escaped it. It has a stout haulm, vigorous growth, plenty of pods, and is first-rate for table. The pods are square at end, thin in substance and packed with Peas. Anyone anxious to try the newly-introduced varieties should include in their selection Chelsonian.—S. F.

**Winter Cabbages.**—The value of these cannot be too highly estimated. Those who can now have nice strong plants of Ellam's Early, Flower of Spring, or any other small precocious variety, and will put them out 15 inches apart on some good ground, giving the plants a good watering to start them, may find as reward at Christmas and in January, if the winter be fairly open, that they have plenty of nice little heads to eat. A sowing of seed of Ellam's Early and l'Etampes, the finest of second early Cabbages, made at once will give plants to go out about the middle of October, soon enough to furnish nice hearts in March, April, and May if all go well with them. Small plantings and often should be the maxim of Cabbage growers.—A. D.

**Potato Early Regent.**—It unfortunately happens that so many persons regard Potatoes more for their size, and the way they fill the bushel, than for their general excellence and suitability for table use. I have just been lifting amongst others Early Puritan, White Beauty of Hebron, Supreme, and other early varieties, and the one named above, Early Regent, gave me a better crop of tubers, of more even and useful table size. None give better quality. In relation to Potatoes generally there is no feature more needed than greater evenness of shape and medium size with plenty of tubers. The big-tubered varieties are of little service to anyone, as no one cares for large ones, and they command but a poor price in the market. On the other hand, a good crop of fine, medium-sized tubers is not only the most economical, but sells best also.—A. D.

**Tomatoes and the disease.**—I recently inspected a large span-roofed house in a private garden in which Tomatoes were grown. Formerly the gardener used to plant each border with plants in an upright position, training them to stakes, but has now abandoned that system, preferring to plant close to the front light, and train them up a wire trellis, similar to Vines, his reason for changing being that when grown thickly together in an upright position it was difficult to check growth, and disease was much more rampant. Grown in a slanting position under the roof glass, each plant received a full amount of sunshine and fresh air, growth was firmer and disease not half so troublesome, and even if it did appear, it was much more easily dealt with. At the place under notice Challenger was found to be much more addicted to disease than some others, and for that reason would not be so much grown in future. The house was built over the ordinary garden soil, which, with the addition of a little bone-meal, suited the Tomatoes well.—J. C.

**French Bean Canadian Glory.**—This is a distinct type of dwarf Bean, and may be classed as of special value in dry seasons, as the pods are produced in great quantity, and when cooked are of excellent quality; indeed, I find the flavour superior to some of the older kinds. It may be asked, do we require so many distinct kinds of Beans, either runners or dwarfs? and I reply, yes, especially if the new ones are good and prolong the season. The value of Canadian Glory is that it is a fleshy pod, compact and stringless—that is, devoid of stringy material, which makes it more suitable, as it is so soon prepared in the kitchen; indeed, if cooked in a young state it may be cooked whole, and is sure to become a favourite

in large establishments. In addition to the last-noted quality, it is a very precocious variety, being one of the earliest Beans I have grown, and, unlike many others, does not become tough in dry weather. Of course, it is well to gather the pods regularly, as if allowed to run to seed the plants lose strength, and if this is done the plants bear an enormous crop of Beans, and will provide dishes for a long season. The Beans when cooked are much liked for their good colour in addition to their quality.—G. WYTHES.

**Watering Asparagus.**—Asparagus, in common with other good vegetables which depend upon this season's growth for next year's supplies, may with advantage get assistance at this season, as heat and drought have affected the growth of the plants. Those who can give moisture freely, or irrigate, are in a good position to build up a strong crown for the next season. Drought in the case of Asparagus is fatal to the good growth of the plant, as unless a robust top-growth is made, there will be weak crowns and small grass next season. Food given now must be given freely, as the season of growth will soon be past, but no one need fear feeding a little later than usual, as, the soil being warm, with a liberal supply of moisture, growth will be later than usual, and in light soils food and moisture may be given liberally till the end of September. Newly-planted beds have suffered from drought, but these, given food now, will be benefited, and beds, if at all old, and which may be forced early, will make larger crowns if given liquid manure freely. We flood our beds if the liquid can be spared; failing this, a dressing of nitrate of soda, fish manure, or even guano well watered in will be efficacious.—G. W.

**Carrot Summer Favourite.**—I had this superb variety on trial this season, and am very pleased with the quality and the way this root matures, as it is superior to the Short Horn, to which type it belongs, but is of a thicker build, without much top, and is a splendid summer variety in gardens where quality and quantity are needed. The colour of Summer Favourite is distinct from most others—bright cochineal-scarlet—with a very small core for the size of root, and few Carrots are more shapely. For exhibition purposes it will take a leading position on account of its size, shape and colour. I am not a lover of the long Altringham type of Carrot, and prefer those of the Intermediate type; in fact, I fail to see the utility of large gross roots for home use, and the size of the one noted is what I admire, while for early spring sowing it is very good, as it soon comes to maturity. I notice any Carrot with a small core or centre is earlier than those which have a large core, and with early Carrots time saved is important. Of course, the same reasons which make it a valuable early variety stand good for autumn supplies, as when sown for late use the roots are sweeter than those sown in early spring.—G. WYTHES.

**Cucumbers, &c.**—Without doubt, the very best results in the matter of good fruit crops from these plants, as also from Melons and Tomatoes, all three having now in low span or lean-to houses very similar treatment, are obtained when the soil is placed in shallow troughs or boxes, as it is now so well understood that restriction of root area into good, sweet turfy loam is far more conducive to fruit production than is the furnishing of too much soil area. In addition to this, the roots, being near and under control, are easily fed from the surface, and in that respect all the needs of the plants are easily supplied. One of our most successful Cucumber and Melon growers, who plants usually two crops yearly in the same houses, and who also has grand crops of Tomatoes, uses shallow, movable troughs. These consist of broad open trellises about 16 inches wide, to the sides of which are fastened stout, clean boards 7 inches deep. Thus a trough 6 inches by 16 inches is furnished. The troughs are laid along over the bottom pipes on cross-bars, and the open trellis is first covered with pieces of rough turf, the compost following, and is slightly heaped in the

centre. Plants are put out in single rows about 15 inches apart; they soon grow fruit, and having carried a good crop are removed, the soil is taken out, the troughs cleaned and whitened with lime, then refilled with soil and plants, and a second crop is taken. That treatment of course applies to Cucumbers and Melons only; the grower in this way never suffers from eelworm. I have in several places this season seen remarkable crops of Tomatoes grown in shallow boxes, feeding with artificial and liquid manure, and keeping the plants heavily cropped over a long season.—A. D.

**Onion Silver Ball.**—Of late years considerable additions have been made to the varieties of Onions; indeed, few vegetables show greater improvement both in variety and culture, such sorts as Record and Ailsa Craig being now grown for their size, and they have their uses, for when cooked as a vegetable they are superior to the imported bulbs. I have seen huge Onions objected to, and I do not advise their growth, but a few special bulbs for the purposes of exhibition are valuable, as the varieties mentioned are noted for their mild flavour. Silver Ball is not a large grower, but is specially suitable for early use. It is a pretty bulb, of medium size, pure white, and of very mild flavour. It is not recommended for keeping, but for supplies during the summer. In shape it is a perfect ball, not a flattened root, and its bright silvery colour makes it a nice contrast to the other varieties. I have found it to be a remarkably quick grower, and seeds sown in the autumn at this date give very early supplies the following summer. It is much liked for cooking on account of its size, fine texture, and mild flavour, and for the purpose named its maturing so quickly makes it valuable.—G. WYTHES.

**Climbing French Beans.**—Whatever faults may have been found with this type of Bean when first introduced, it has fully justified its advent, and I am prepared to place them in the front rank for quantity, quality, and earliness, three cardinal points of great importance to those who need early vegetables of the best quality. During the prolonged heat and drought of July, and early in August, the Climbing French Bean has given us a splendid lot of pods, young, of good shape, and just the kind desired in the kitchen. They are less stringy than the dwarf Bean, and, what is so important to those who need quantities, they are more lasting, they produce freely, and are less influenced by heat and drought, while the quantity which can be gathered from the plant is wonderful, as they give supplies when the dwarf kinds fail. I am induced to class these as superior to the runner Bean, for they are much earlier, require less space, and are, in my opinion, more productive. For gardens of limited size they are invaluable, as where the dwarf varieties cannot be sown often, a row or two of the new climbing type will furnish a liberal supply till cut down by frost.—G. W.

**Pea Michaelmas.**—This is one of the newer introductions, and one worth a special note for its crop, lateness, and good qualities. Like all the best autumn Peas, it is of a deep green, and, unlike some very early ones, it remains good a long time, and is noted for its splendid flavour. If I can compare it, I should describe it as a dwarf Ne Plus Ultra. It has the good qualities of the old favourite, at the same time is dwarfer and quite as prolific as that variety. Though only 2 feet to 3 feet high, it bears profusely to the bottom of the haulm. The habit and strength of haulm denote its good qualities, and last year when on trial in our light soil it exceeded our expectations, as it cropped for so long a season and gave Peas of splendid quality. It is not a very large pod, but may be termed above medium size, and is filled with large Peas of a deep green colour, remarkable for their sweet flavour. It is free from mildew and has no disease of any kind, this freedom from mildew being a strong point in its favour, as so many late-growing Peas mildew badly. This year this variety has stood the heat and drought well. It is very vigorous,

extremes of weather affecting it little, and, being what may be termed a continuous cropper, it bears a long time.—G. W.

**Pea Maincrop.**—Defects in the Pea crop have been found out this year, and any new variety which held its own may be grown in future with confidence. Requiring a good number of Peas during June and July, I am always on the alert to find the best for our light gravelly soil, and last year I was so pleased with the cropping qualities of Maincrop that I grew it more largely this year, and it was specially good, standing heat and drought and podding grandly, without getting yellow, tough, and flavourless, as some of the midseason varieties quickly do in dry year. Maincrop gave us nice green pods to the last; the haulm continued green and was not infested with mildew, showing it to be an acquisition as dry-weather Pea. In colour it much resembles Ne Plus Ultra, but the haulm is more robust branching, and the pods larger, thicker, and longer; but let me advise intending cultivator not to sow too early. It does not like too much cold or wet in its infancy, as the variety appeals to me to be more of a late kind than a midseason, but sown from April to June it is a grand Pea and of superior table quality. I am a great lover of this class of Pea with a dwarf growing Maincrop being 3 feet in height. These dwarf kinds are readily cultivated, needing less support and space.—G. W.

**Record Onion.**—When I grew this variety both from glass-raised plants, dibbled out, and from an ordinary spring sowing, I found it to be late in ripening that practically it did not ripen at all. That was on light ground at Richmond last year. Differing in this respect from several other varieties, I could not yet classify it at all. Judging by the reference recently made to fine sample bulbs shown under the name of Record at the Westminster Aquarium last November, I am very much puzzled to determine whether the splendid bulbs in question were the true Record or had been grown by mistake under that name, as these bulbs were unquestionably Ailsa Craig. And I was even then, when seeing them, all more puzzled because what I have previously shown as Record was of a flattish nature. What is the parentage of Record? Has it any of Tripoli blood in it? Onion varieties come so fast, or, perhaps, to put it more correctly, our nomenclature grows so rapidly, that it is hard to keep pace with it. I could but have my sympathy with a seedsman who the other day showed me his bulb stock of a dozen assorted diverse ones, when he said, "We want for customers just about three or four types, one round and flat, white, and a good crimson, one that satisfies all requirements. As to so many becoming a nuisance."—D.

**Physalis Franchetti.**—Having been one of the first to recommend this great Bladder Cheese from Japan in THE GARDEN, and having been the cause of many disappointments from those who have far failed to grow and fruit it freely, I should like to say that I recently saw it luxuriant and fertile in a rock bed at Carton, Maynooth, co. Kildare. It there forms a fresh green, spreading mass of stems, the tallest of which are about 3 feet high, and bearing fruits and flowers freely all the upper leaf axils. Some of the swollen calyces, though not as yet coloured, are larger than any figure of this plant that I have seen, and much larger than any ripe specimens I have had under my notice. Not only is the plant much taller and more robust than P. Alkekken but its leaves are of a much lighter and brighter tone of green, giving to the plant quite a fresh and distinct appearance. A deep, rich soil and stones seems to suit this fine new introduction admirably at Carton, so those who have hitherto failed, myself included, may ultimately succeed. The plant grows so easily and rapidly from seed that a good strong stock may soon be obtained.—F. W. B.

TREES AND SHRUBS.

THE AMERICAN DOGWOOD.

(CORNUS FLORIDA.)

THIS is one of the most beautiful of our spring-blooming trees. We American readers of your noble journal have often wondered to see so little mention made of this lovely tree, and to see it does not flourish with you as in the United States, for so fine a plant cannot be unknown to English gardeners. This specimen was planted some twenty-five years ago in a best stone clay soil, and is now some 14 feet

The fruit, in bunches of brilliant red drupes, is almost as showy as the blossom, so that this hardy small tree should be planted for its autumn effect almost as much as for its vernal glory.—MARY L. S. PERKINS, *Oatfield, East Walnut Hills, Cincinnati, Ohio.*

\* \* \* It has often been planted, but we never saw it flower. Do any of our readers find it flowers well, and where? The illustration shows a very handsome tree and strange to English eyes.—Ed.

**Ampelopsis and Ivies.**—A very showy wall may be had by planting alternately Ampelopsis Veitchi and Golden Ivies. During the season of

tenaciously to the brickwork that snow and wind have no power over them.—C. C. H.

STOVE AND GREENHOUSE.

TUBEROUS-ROOTED BEGONIAS AT LEWISHAM.

THE increasing popularity of the tuberous-rooted Begonia both for the flower garden and the conservatory is due to a very large extent to the energy of the leading specialists, who, during recent years, have given us many fine kinds. Notably among these is the display made by Mr. Jones at the Rycroft Nursery, Lewisham, where



*The American Dogwood (Cornus florida). From a photograph sent by Mr. J. L. Stettinius, Oatfield, East Walnut Hills, Cincinnati, Ohio.*

high by 17 feet across, well branched to the ground. The flower buds, which are formed the previous season in clusters at the tips of the twigs above the tree, begin to open about the 1st of May in the latitude of Cincinnati. The first leaves of the involucre grow very rapidly and turn white (there is also a pink form) as they develop in size, until the whole plant is a mass of snowy beauty, before the true leaves are grown to full size, and one can easily fancy the tree covered with great white butterflies when open wings 3 inches to 5 inches across. Its grace and beauty cannot be well described, but must be seen.

growth the brilliant golden shade of the Ivies and rich green of the Ampelopsis form a pleasing contrast, while later in the autumn the beauty is enhanced by the rich crimson shade of the latter. The one drawback of such an arrangement is that the Ampelopsis lose their leaves during winter, causing the wall to have a somewhat patchy appearance. The small-leaved Golden and Silver Ivies, besides being very attractive, give far less trouble than the large-leaved, coarser sorts, which require frequent clipping in to induce a neat, close growth, and they can now be purchased at such a reasonable price that a long reach of wall may be quickly covered at a little cost. A few tacks given to the plants when first planted is all that is necessary, as they cling so

special pains have been taken to keep the stock up to a high standard of excellence. Special attention has been given to raising those kinds which have stout erect footstalks, thus dispensing with the aid of stakes for displaying the individual blooms. Of course there were sorts to be seen where the drooping form of growth was specially recognised, but in these instances they were perpetuated for the special purpose of using them for baskets, or any form of planting where the drooping character of the growth would be valuable. The double flowers were of a high order of merit, an immense number of seedlings possessing flowers of exceptional size and beauty, and promising to supersede others now thought highly of. The Camellia form of double flower

certainly appears to be the more desirable one to perpetuate, and of these there was an excellent assortment. The heavy double flower does not compare favourably with the neater blossoms of Camellia shape and a single eye. Some of the colours too were quite novel, and cannot fail to create a greater interest in the flower. The variations in the different self colours appeal to almost every taste, orange, buff, salmon, rose, red, scarlet, vermilion, yellow, white, and intermediate shades of colour being represented in the many beautiful things seen. The fancy or margined flowers have also made a marked advance, the colouring of the margins in several instances being almost unique. A real gem has been raised this season, the ground colour being a pretty shade of yellow with a striking margin of reddish-crimson. This seems likely to be the forerunner of a new race, and will be welcomed as a contrast to those fancy flowers with a white ground. The best display is made in a large house 103 feet by 25 feet, a grand mass of double varieties being arranged on the centre staging, while the staging all round the sides is filled with smaller plants of the doubles and singles too. Other houses are devoted to the raising of stock, and a large structure is set aside for the purpose of seed saving, and where many interesting experiments and crosses are each year carried out. Over 100,000 seedlings are planted out and potted up this season.

#### DOUBLE FLOWERS.

Conspicuous among the double flowers was a variety named H. J. Jones. This is an immense vermilion-scarlet of Camellia form. Another flower of similar form was Beauty of Belgrove, colour somewhat resembling La France Rose. Mrs. Walter Finch, a bright crimson of exquisite form, was also much admired. Viscountess Cranbrook is an unusually good sort, rosy pink flower with large white centre. Miss Clara Walker calls for special comment; this is a double blush-pink shaded salmon with cream centre. Princess of Wales is a new flower of large size, colour, blush-pink, fine erect footstalks. Jubilee White is a very neat flower with erect stems, Camellia form and free flowering. A very pleasing bright pink is Mme. Garde, the flower is prettily crimped at the edges and is also large. Another Camellia-shaped flower is Triumph, colour bright crimson, nice habit. A grand yellow of good form is Yellow Queen. This variety is free flowering, and is considered to be the finest yellow Camellia-shaped flower in cultivation. A flower of a lovely flesh colour is Olive Smith. Rycroft Favourite is a variety of a pleasing shade of bright pink beautifully fringed large full flower on erect stems. An effective flower is Marginata, having salmon-blush flowers, neatly-edged light pink. One of the best white Camellia-shaped flowers is White Queen. A flower of exquisite shape is Miss Dolly Fell, pure white, with crimped edges and erect stems. Rycroft Salmon should prove a fine exhibition plant, with large salmon-rose flowers standing out well above the foliage, and with a nice branching habit. A light primrose flower of a drooping form of growth is Mrs. Stottart, and this should make a good plant for baskets, &c. Lady Guest is a bronze-yellow, with salmon-pink margin, nice dwarf habit. A good bright crimson is B. R. Davis, a very effective flower. Mottled Beauty is a slightly mottled flower, colour bright pink, mottled white, quite distinct. A plant with good branching form of growth and invaluable to the exhibitor is Victory; this is a salmon-scarlet. The foregoing are a few of an immense number of high-class flowers seen here.

#### SINGLES.

The singles are very fine indeed, several of the best being named. Those deserving special notice are Mrs. G. P. Linford, pink, white centre; Maud Surman, pure salmon; Echo, apricot; Rycroft, apricot; Novelty, margined, bright red on a white ground; Beauty, magenta-pink, light centre; and Mars, deep vermilion. C. A. H.

*Encephalartos villosus*.—I have had a plant of *E. villosus* for twenty-six years. The fronds

are 6 feet long, though the root has not developed much, which I attribute to the gardener cutting off the fronds when they change colour. It is now in flower. The flower is 18 inches high, with a series of scales like a Pine-apple. Is this rare? Is there any particular treatment? Is the plant likely to die? Is it worth while to photograph it?—J. W. B.

\* \* \* The stem of the *Encephalartos* in question increases very slowly, and the fact of the fronds being cut off when they change colour would have no effect on the growth of the stem, as presumably it is only the very old fronds that are treated in this way, and they have lost nearly the whole of their vitality. In the case of an established specimen it occasionally flowers, but plants of this class are now so little grown that its flowering, though not exactly rare, is decidedly uncommon. No particular treatment is needed during the flowering period. It is not at all likely to die, as the crown of young leaves will push the cone on one side and develop without any check. As it is not often seen in bloom, a photograph of it would be interesting.

#### GREENHOUSE AZALEAS.

THE note on greenhouse Azaleas (p. 137) is very opportune, for there are at least two items connected with these Azaleas to which special attention needs to be now directed. One of these is that where Azaleas of this class are kept out of doors particular care must be paid to the watering, as towards the end of the summer, with occasional showers and frequently heavy night dews, both of which tend to make the surface of the soil moist, there is far more danger of the plants suffering from drought than during the height of the summer, when one is not so likely to be deceived as to the state of moisture around the roots. The second item to which attention may be directed is that very soon the importations of these Azaleas from Belgium will reach this country, and an opportunity is then given of increasing one's stock if required. As a rule the earlier importations reach here about the latter half of September, and it will be found advantageous to obtain them as soon as possible afterwards, as the plants can then be treated according to one's requirements; whereas, if kept in stock by dealers anxious to sell them, and the plants are obtained late in the season, one does not know the treatment to which they have been subjected during the interval between their arrival in this country and the time they were sold. They are frequently sold in quantity at the various auction rooms, but obtaining them in this way is a somewhat risky matter, for though the plant is likely to die if the roots are once allowed to get thoroughly parched, yet the injury may not be seen for a few days, particularly if the soil has been moistened meanwhile. Of course, plants that have stood about in sale rooms and such places, often in draughty passages, are far more liable to suffer in this way than those which have been sent direct to a nurseryman and properly attended to on their arrival without delay. The Azaleas sent from abroad are lifted from the beds in which they have grown and packed together as closely as possible in order to economise the expense of carriage. Then directly on receipt I prefer to unpack them and soak any that are at all dry in a tub of water, so that the ball of earth is moistened completely through, then they are stood on the floor of the potting shed and sprinkled overhead. The following day they will be in good condition for potting, using for the purpose good sandy peat. Care must be taken to work the soil thoroughly around the roots, but it need not be rammed down to the extent that some think necessary for the cultivation of Azaleas. An examination of the imported plants with their luxuriant growth will show that Azaleas will both grow and flower well even when the soil is of a far more open and loose nature than most imagine. As the Azaleas are planted out in Belgium, the balls of earth are frequently very irregular in shape, and unless they are some-

what reduced, pots out of all proportion to plants will in some cases be required. When happens one need not be afraid of reducing roots to reasonable proportions, as no injury thereby caused, provided the plants receive reasonable attention afterwards. When potted I prefer to keep the plants in a frame the lights of which are kept rather close for a time, and shaded during bright sunshine. An occasional syring overhead will tend greatly towards keeping foliage fresh until the roots recover their normal activity. In about a fortnight they will become to a certain extent established, when more may by degrees be given and the shade lessened till they can do without it altogether. After this they will require the same treatment as established plants. In alluding to the fact that Azaleas do not require such very hard potting I of course refer to the freshly imported plants that have been lifted from the ground, as in the case of old-established plants the ball of earth gradually gets exceedingly hard; so if they are shifted and the new soil is not made correspondingly firm, the plant would be simply starved to death, as all the water would percolate through the new soil, leaving the ball of earth quite dry. In old plants, however, potting is very seldom needed. H. J.

#### BORONIA SERRULATA.

It is not often that one sees a good specimen of this *Boronia*, and it must be admitted that greenhouse plants require so much skill and patience to bring to specimen size. Even in the days when this class of plant was in high favour, and when huge plants were shown in splendid condition at the London exhibitions, a really first-class specimen in perfect health was rare. My leading growers were apparently unable to induce perennial vigour in this *Boronia*, and gave up the culture for that of other things more reliable. My plants are so telling in a collection of stove and greenhouse plants, and for this reason the exhibitors of them have been anxious to secure a good specimen of the *Boronia serrulata*. There is but little difficulty in cultivating this species up to a certain age. With a little more care it is necessary for Cape Heaths one may count on reasonable certainty on inducing a free, heavy growth. The cultivator's real trouble begins with what is called the three-quarter specimen. What it really is that without apparent effort carries off this *Boronia* at a certain age has not been quite satisfactorily determined. The attack is so sudden and at times so violent that in less than a week a plant that from its infancy has been a picture of healthy vigour is completely ruined. More frequently the attack is only partial, a branch or two giving out and the remainder of the plant remaining quite healthy. It rarely happens, however, that a plant is of much use after it has once been attacked in this way. The partial defoliation deprives it of its value for exhibition purposes, and sooner or later it collapses entirely. The seat of disease is apparently near the soil, thus intercepting the flow of sap, and causing perfectly healthy portions of the plant to shrivel. As so much dreaded enemy almost invariably does its work in the dull months of the year, it is safe to assume that damp in some way is the predisposing cause. It is possible that if that portion of the stem which touches the ground through the winter months be kept dry, the danger would be minimised. A successful grower of hard wood greenhouse plants once told me he had in a great measure proved this to be the case. He made a point of growing on his plants to specimen size, either from cuttings of his own striking, or from quite small plants when obliged to purchase them. Before re-potting from 2½ inch pots he sawed round the pot some 2 inches below the rim. When the plant was placed in a larger pot the upper portion of the severed pot was retained intact, and this remained throughout the period of time required to bring it into specimen size. The advantage claimed for this plan

ROSE GARDEN.

THE YELLOW BANKSIAN ROSE.

I AM forwarding you a photograph for reproduction, if possible, to show your numerous readers how well this Rose flowers in the favoured climate of Devon. The plant was photographed early in May, 1893. Though it blooms most profusely each year, I, too, find that the white kind is very shy in flowering. It does not grow so freely nor so strongly. I prune the plant every year after flowering, and tie in all I can in the way of young growth without crowding. The very strong shoots I dispense with, unless required to fill up, then I shorten to about half their length. Unlike your correspondent (see THE GARDEN, July 24), I do no further pruning in the spring, though no doubt his method is a good one, as it is conducive to keeping the growth close to the wall. Banksian Roses require a wall due south, even in this part

Especially care must be taken to secure perfect drainage, as the roots of this Begonia are easily injured by excess of moisture. The compost should be used in a moist but not wet condition, and should be firmly pressed in, as this Begonia never attains the dimensions that many plants of a similar nature do, growth being comparatively slow. Considerable caution in repotting is indispensable. If a plant is given a greater amount of fresh soil than the roots can take possession of in the course of the growing season, there is much danger of their coming into an inert condition, and the probability is that when the dull days arrive the foliage will take on that yellow lustreless appearance which too frequently mars the beauty of this species. Plants that are repotted after blooming should get as small a slift as possible, as they have not so long a season of growth as young ones repotted early in spring. Another most important item is a free admission of air whilst avoiding draughts. Where plants are wintered in span-roofed structures, enough air can through the winter be admitted from the top ventilators. In the spring when cold easterly

when so desired water could be given without wetting the collar of the plant, so that the condition of the stem could be maintained in a semi-dry condition. In this way he asserted that the small collapse to which such things as Boronias, Pteleas, Hedaromas and some Cape Heaths are liable would be almost entirely averted. This individual had some very fine specimens, which remained in good health, to my knowledge, for several years, and many of them were grown right from the cutting. The most successful propagator of Boronia serrulata I ever knew took cuttings from plants that had made growth in a light airy house, in a temperature of about 50°. The cutting pots (6 inches) were about two-thirds filled with drainage, a little rough material being added on that, and then filled with finely-sifted, washed peat to within 2 inches of the top, finishing off with silver sand. The pots were plunged in a tan bed, the cuttings were covered with bell glasses, which were removed dry every morning. In this way about 90 per cent. of the cuttings made roots. When rooted they were gradually inured



The yellow Banksian Rose in Devon. From a photograph by Mr. J. Mayne, Bickton Gardens, Salterton, Devon.

of England, to flower them well, as we had one until recently on a west wall, but not a single flower appeared, consequently it was removed to a south aspect. J. MAYNE. Bickton, Devon.

winds accompany bright sunshine much injury is frequently done to this class of plant, and care must be taken that the cold air does not directly pass on to the foliage. J. C. B.

**Gloxinias as market plants.**—I was recently much struck at the display of small, exceptionally well-grown plants of Gloxinias exposed for sale in Norwich market. The plants occupied pots about 3 inches in circumference and each carried from three to four fine highly-coloured blooms, the price asked being 6d. each. They were seedlings of this year's growth, being sown in March and grown on in a brisk moist temperature, care being taken to harden them well off before bringing them out into the open air. Very few who purchased them would be able to do anything with them the second year, but if they only remain in good condition for a few weeks, which with care they will do, they are well worth the money asked for them. The strain was one of the best I had ever seen, the colours of many of the flowers being exceedingly beautiful.—J. C.

**Rose Mrs. James Wilson (Tea).**—This is a good Rose that appears to be a combination of The Bride and Marie Van Houtte. It has the lovely carmine shading of the latter variety, but its globular flowers of pale lemon colour somewhat resemble The Bride, although there is an absence of the pointed outer petals peculiar to this variety. Mrs. James Wilson is a vigorous variety, and although the flowers do not always open well, it is nevertheless a serviceable Rose. P.

**Rose Duke of Connaught (H.P.).**—At the present day Tea and Hybrid Tea Roses claim rather the larger portion of our attention, but we must not entirely forget our old and useful friends the Hybrid Perpetuals. The above-named variety for garden decoration is quite first-rate. Its colour is a peculiar fiery crimson, with rich vel-

the general atmosphere of the house, and then into small pots in sandy peat. They were kept in the propagating house until the roots began to work freely in the compost, and were then removed to cold frames, being shaded from very hot sun, carefully watered and sprinkled overhead in the morning on fine days. By the autumn they were well established in their pots, and were in good condition for shifting into 4½-inch pots the following spring. Peat of the very finest quality must be used for this Boronia. It should not be cut, but pulled to pieces by hand into lumps about the size of a Cob-nut, adding one-sixth of coarse silver sand. The end of March or beginning of April is the best time for repotting in the earlier stages of growth, but later on it should be done when the flowers fade, and just as the young growths are pushing. After potting, a somewhat close atmosphere should be maintained, but as soon as the roots begin to work into the new compost and growth is being freely made, abundance of air must be given. A little shade from hot sun is beneficial, but this must be reasonable, and must not in any case be overdone.

vety shading; the form of flower is almost round. It makes good vigorous growth, not rampant, but quite strong enough, and its flowers are freely produced in summer and autumn.—P.

**Rose Joseph Bernacchi** (Noisette).—This is an excellent climbing Rose of fairly vigorous habit. It has fine long buds of a pale cream colour; in fact, both in bud and blossom this variety somewhat resembles that grand variety *Mme. Hoste*. Any gardener who has large demands for Roses with long buds, for bouquets or button-holes, would find in *Joseph Bernacchi* a really useful kind, and it can be cut with fine long stems, which are so essential to the proper display of any Rose.

**Rose Comtesse Panisse** (Tea).—This pretty variety is certainly deserving of more popularity. It is a good grower, making good solid wood and thick leathery foliage. The colour is a pleasing shade of flesh-pink mingled with rose and a distinct coppery shading. The petals are almost wax-like in texture, a fact which enables this Rose to withstand the rain better than many of its more delicate-petalled relatives. The flowers also show up well, being borne upon good stiff stalks, and are generally seen in corymbs. It is not a show Rose and the blossoms are only of medium size, but I can strongly commend it as a garden variety.—PHILOMEL.

**Rosa Pissardi**.—The true kind bearing this name is a lovely semi-double Rose for the garden. It is a very continuous flowering kind, almost as much so as *Stanwell Perpetual*. The paper-white flowers, which are about 2 inches across and generally appear in corymbs, contain two and three rows of petals. These flowers when expanded have a striking resemblance to the Musk Rose *Eliza Werry*, but the difference in the varieties is marked in the tiny buds, those of *R. Pissardi* being elongated and pale pink in colour, whereas *Eliza Werry* has buff-coloured buds, smaller, and almost round. *R. Pissardi* has pretty lanceolated foliage of a bright green colour. It is a strong grower, but of compact habit, enabling the flowers to show to great advantage on the plant. This variety has the sweet fragrance of the Dog Roses.—P.

**Rose Eugene Furst** (H.P.).—It appears strange that some of the best Hybrid Perpetual Roses for garden decoration remain in comparative obscurity. Perhaps this will not be so when the National Rose Society institutes an autumnal Rose show, and also gives more encouragement to the display of useful Roses which perhaps are devoid of finish, as looked at through their critical eyes, but which, nevertheless, surpass some of their more refined relatives for garden decoration. The above Rose is a case in point. One rarely meets with it at an exhibition, but it is to my mind one of the best crimson Roses for cutting. It never fails to yield a good supply of flowers of a vivid scarlet-crimson colour, and especially is it useful during the month of August, when there is rather a dearth of Hybrid Perpetual Roses. It is a good vigorous grower, equally useful for bedding, to grow as a pillar Rose, or as a standard.—P.

**Semi-climbing Teas under glass**.—During a recent visit to the gardens of Hatfield House I was astonished to see that lovely Rose *Sunset* clambling away up the sunny side of the Camellia house as though it were a real climber. The plant was fully 10 feet high and covered with a mass of splendid blossoms, which Mr. Norman doubtless found very useful for cutting. The plan adopted at Hatfield, of planting out these dwarf Teas and using them as semi-climbers, is a very good one. One can thus obtain a supply of useful flowers without the inconvenience of the over-luxuriant growths of the real climbers. *Sunset* was not the only variety employed, for that good old kind, *Niphetos*, appeared just as vigorous, and one almost questioned the need of a climbing *Niphetos* when the old variety could be so successfully grown. I should mention that the conservatory in which these Roses were growing had the sides entirely of glass, so that abundance of sun was given to the plants, which doubt-

less considerably assisted in producing the effect described. Other excellent varieties for similar treatment would be *Kaiserin Augusta Victoria*, *Perle des Jardins*, *Anna Olivier*, *Bridesmaid*, *Catherine Mermet*, *Marie Van Houtte*, *The Bride*, *Mme. Lambert*, *Mme. Hoste*, *Souvenir du President Carnot*, *Medea*, *Belle Siebrecht*, *Mme. Charles*, *Souvenir d'un Ami*, *Caroline Testout*, *La France*, *Duchess of Albany*, and *Mme. Abel Chatenay*.—P.

**Rose Papa Gontier**.—As a winter Rose this is very popular with the market growers in Worthing and neighbourhood, where large areas covered with glass, devoted to the cultivation of a few popular classes of plants, occur in all directions. It belongs to the Tea section, and, like many others of its class, as the flowers are not very double, it is more attractive in the bud state than afterwards. The buds are really charming, being particularly long and of a pleasing bright rosy-crimson colour. It meets with a ready sale and possesses the great merit of developing its blossoms throughout the winter in less heat than most of the other varieties; indeed, in too high a temperature the blooms lose their richness of colouring. This Rose was, I believe, sent out by *Nabonnand* over a dozen years ago, and our American cousins were the first to find out its value for flowering under glass, as occasional notes used to appear in the horticultural publications on the other side of the Atlantic, while it was as yet almost unknown in this country. Judging by the numbers now grown, it would appear to have become quite an established favourite. *Rose Papa Gontier* is another illustration of the fact that a plant may be in cultivation for years before its merits are recognised, a very striking example of which is to be found in the case of the now popular *Pelargonium F. V. Raspail*, which was sent out by *Lemoine* as long ago as 1878, yet it almost dropped out of cultivation, and then some years afterwards bounded into popularity.—H. P.

## FRUIT AND VEGETABLE CROPS.

### SOUTHERN.

**Warlies Park, Waltham Abbey**.—The fruit crop here and in the district this year is very poor. Apples are very much under average and the fruit is a poor sample. *Keswick Codlin*, *Manks Codlin* and *Lord Suffield* among the kitchen, and *Irish Peach* among the dessert, are the only varieties I have bearing. Pears are a little better, but not up to the average; the fruit is a fair sample, especially on the walls. Plums, with the exception of a few on the walls, are a failure. *Damsons* the same. *Gooseberries* are over average. *Black Currants* average. *Red Currants* under average. *Raspberries* under average. *Peaches* on walls are not up to the average and the fruits are small. *Apricots* are an average crop and the fruit good.

On the whole, this has been a good vegetable season, and most of the crops are above average. *Potatoes* have not been so good with me for several years, the tubers being of a nice size and shape, clean, and entirely free from disease. All root crops are good; so are all the *Brassica* tribe, with the exception of *Canfliflowers*, which have suffered very much from the hot weather we have had lately.—WM. CLARK.

**Caversham Park, Reading**.—Neither for quantity nor quality will the fruit crop in this district compare favourably with those of the past five years. Apples are fairly good, and some varieties, such as *Devonshire Quarrenden*, *Cockle Pippin*, *Cox's Orange* and *King Pippins*, are heavily laden, while on several trees of *Blenheim Orange* there is no fruit whatever. Pears are about an average, but I fear the quality will be poor. Plums are bad, as are also *Cherries*, with the exception of *Morellos*, which are good both in quantity and quality. *Peaches* on walls are good. *Raspberries*, *Currants* and *Gooseberries* are under the average, but *Strawberries* were very

good owing to being mulched early. *Nuts* are very good, and *Figs* on walls promise to do well.

Early Peas were exceptionally good, but season and late varieties are poor, as also Beans. Green crops generally are bad, and toes are small and below the average. On roots sown early have done well, and all kinds promise a good return, but are sufficient from the prolonged drought.—W. MILES.

**Arundel Castle, Sussex**.—Apples are under average. *Cox's Orange Pippin*, *Cox's Pomona*, *Lane's Prince Albert*, *Lord Suffield*, *Keswick*, *lin*, *Cellini Pippin*, *New Hawthornden*, *Mundi*, *Stirling Castle*, *old Nonsuch*, *Peach*, *Hambledon Deux Ans* and *King of Pippins* are carrying the best crops. *Pear* under average. *Beurré Bose*, *Beurré Duchesse d'Angoulême*, *Eyewood*, *Duronde*, *Catillac* and *Uvedale's St. Germain* are carrying heavy crops. Plums are a failure both on standards and walls. *Peaches* and *Nectarines* are an average crop, some trees badly infested with spot. *Cherries* average. *Cherries* poor. Small fruits average. *Black Currants* good. *Nuts* and *Strawberries* over average.

Vegetable crops looked well until end of last fortnight have checked Peas and Beans. *Potatoes* are full of disease, both early and late kinds. Disease appeared in the neighbourhood at the end of June, earlier than I have known it previously.—E. BURBURY.

**Basing Park, Alton, Hants**.—The fruit crop is under the average. Some of the trees have fair crops where they are protected from the north and east winds and screened by trees. I attribute the failure to frost in May and June, which destroyed the crops, and particularly where they were exposed to the cold winds. Many of the trees have good crops on the south side of the trees. The Apples have dropped much of late from the dry weather and cold nights. Pears are good average crops on the walls on protected trees, but they are dropping much from northerly winds. Plums are almost a failure. *Cherries* not more than half average. *Peaches* poor, and *Nectarines* under average. *Strawberries* not more than half a crop; all early blossoms were cut off by frost, and the hot and dry weather caused the fruit to drop early, and the Strawberry season was soon over. The *Gooseberry* crop was under the average. *Black Currants* were a good crop. *Raspberries* under average, quite small. *Black Currants* under the average, but fruit fine and good. *Lee's Prolific Black Currant* is the best. I will grow no other, as that always gives a good crop of first-class fruits of a fine flavour.

Vegetables have been good this season where they have had plenty of water and where the soil is good and rich.—W. SMYTHE.

**Eaglehurst Castle, Fawley**.—Apples are carrying heavy crops, excepting a few trees that bore very heavily last year. *Raspberries* were not so good this year, either in quantity or size of fruit. Owing to the drought last year they did not produce such fine canes. *Gooseberries* were the best crop we have had for some time. Plums are very scarce here this season, some trees carrying only one-third of a crop, others none. *Apricots* were only a moderate crop, also *Peaches* and *Nectarines* outside. The *Strawberries* here bore very heavy crops. The soil grows are *Sir Joseph Paxton*, *King of the Earth*, *President*, and *Dr. Hogg*. *Royal Sovereign* planted last autumn and it produced some fine fruit this season. *Sir Joseph Paxton* and *King of the Earth* do well here. Planting early in autumn, from plants layered in pots, gives the best results.—HENRY GARRATT.

**Hackwood Park, Basingstoke**.—The fruit crops in this district are very poor. Apples, I think, are the worst. *Lord Grosvenor*, *Lord Suffield*, *Potts' Seedling*, *Warner's King*, *Keswick* are the best. Pears are much under average. *Souvenir du Congrès*, *Louise Bonaparte*

sey, Mme. Treyve, Pitmaston Duchess, Beurré d'Orgerau, Beurré Diel, and Winter Nelis have a fair crop. Plums almost a failure, even the Victorias. Peaches and Nectarines very few. I never remember to have seen the trees blistered so badly as this year. Apricots a failure. All small fruits much over the average.—J. BOWERMAN.

**Waddon Gardens, Winslow.**—The fruit crops in this district are rather below the average. Early in the season there was every promise of good crops, but a long spell of cold, cutting winds and late frosts destroyed most of the bloom, so that with the exception of trees in sheltered positions the crops are very poor. Apple trees in sheltered positions have borne well, especially the following varieties: Keswick Codlin, Cox's Orange Pippin, Bismarck, Peasgood's Nonsuch, Emperor Alexander, Mr. Gladstone, and King of the Pippins. Pears, on the whole, are a poor crop. Plums in sheltered positions fair. Gooseberries and Currants have borne plentifully, and in this immediate vicinity been quite free from the caterpillar of the Gooseberry sawfly. Strawberries have been an exceptionally good crop, excellent in quality and large. The varieties that do best with us are the following: Royal Sovereign, President, Scarlet Queen, and Laxton's Latest of All. Raspberries have cropped abundantly, especially Superlative, which I find does better than any other variety.—J. MILSON.

**The Hoo Gardens, Welwyn, Herts.**—Apples are under an average crop. Pears average. Plums under the average. Cherries a good average crop, especially Morellos. Peaches and Nectarines are good and the trees healthy. Apricots are very poor. Small fruits are heavy and of good quality. Strawberries very good. Nuts of all kinds a most remarkable crop.

The first and second early Potatoes are small, but the later varieties appear to give larger tubers.—C. E. MARTIN.

**Midbrooke Park, Sussex.**—The Apple crop is below the average. Some varieties are bearing heavy crops of clean-skinned and equal-sized fruit. All the trees of Blenheim are bearing full crops. That useful Apple, Forge, is bearing heavy crops, more especially upon old trees. No Hawthorned on espaliers is cropping very freely; no fruit upon standards. Lane's Prince Albert and all the different sorts of Codlins are bearing good average crops. Apricots above an average crop, fruit large and of first-rate quality. Cherries (sweet) almost a failure. Morellos an average crop, but small. Figs are an average crop. Black Currants above an average crop; fruit extra large. Red and White Currants fair average crop, but the fruit rather small. Gooseberries an extra heavy crop of fruit. Blackberries good average crop. Medlars below an average crop. Nectarines poor. The trees suffered very much from blister during the cold east winds. Pears and Nuts very plentiful. Peaches good average crop, but fruit smaller than usual. Plums almost a failure upon wall trees and standards. The only sorts bearing fruit are Prince Englebert, Red Magnum Bonum, and Victoria planted upon a west wall. Quinces an average crop. Raspberries a plentiful crop, Superlative bearing the best crop and Prince of Wales coming next. Strawberries above an average crop, but owing to the dry weather the crop was soon over. Present stood the drought better than any of the other sorts grown. Walnuts very few. Damsons none.—WM. CHRISTISON.

**Topmore, Maidenhead.**—The fruit crops generally are somewhat under the average in this, the South Bucks district. The greatest loss will be found in the scarcity of Apples, which are not bearing a crop. There are exceptions; for instance, Blenheims are quite heavily cropped in the Burnham district, two miles distant on lower ground. I noted, however, that last year these trees were fruitless, and this may account partly for their crop this. The trees may possibly have had more strength in the blossom and able to withstand

cold winds and frosty nights better than others that had cropped freely the previous year. The blossoming of trees was profuse in all instances, but why an occasional orchard is to be found well cropped in similar situations to those just the reverse, I am unable to explain, unless the facts above stated have some bearing on the question. Bush trees on the Paradise stock have generally cropped better than orchard trees, a few varieties, as Grenadier, Lord Grosvenor, Lane's Prince Albert, Lord Derby, Ecklinville Seedling, Worcester Pearmain, and Bismarck carrying good crops. Pears are almost a failure; an occasional tree may be found cropping fairly well. Peaches and Nectarines on walls are excellent as regards crop, and the trees very healthy. Severe thinning of the fruits has been necessary. Apricots are very poor, and the same may be said of Plums both on walls and standards. Both Morello and sweet Cherries on walls are, and have been, plentiful, but on orchard trees the crops were generally very poor. Gooseberries and Red Currants were plentiful. Black Currants are about half a crop. Raspberries promised to be good, but the dry weather which set in at ripening time was too much for them and half the crop dried up from want of moisture. Nuts are very abundant.

The vegetable crops have been generally excellent, although Peas, Beans, and other subjects are now feeling the effects of the continued dry weather. Potatoes are cropping abundantly, and very little disease is apparent up to the present.—C. HERRIN.

**Woodhatch Lodge, Reigate.**—Apples are under average. The varieties that are cropping well are Stone's, Warner's King, Bess Pool, Stirling Castle, Prince Albert, Wellington, Hornmead's Pearmain, Duchess of Oldenburg, Allen's Everlasting, King of Pippins, Cox's Orange and Blenheim Orange. Pears are under average. A few espaliers on a wall have good crops. Plums are a failure. Gooseberries under average. Currants (Black and Red) are poor. Raspberries average, especially good being Superlative.

Peas have been good this season. Chelsea Gem, Earliest Marrow, Exonian, Veitch's Main Crop, Autocrat and Chelsonian have cropped well. Beans have done well, and all the green crops are looking well. Potatoes will be a light crop, but at present they are free from disease.—C. J. SALTER.

**Kingston, Surrey.**—Very erratic are Apples in this locality. Some growers have none; others, especially on old trees, have plenty. The Codlin family give the best results, although Prince Albert, Blenheim Pippin, King of the Pippins, and some small fruited have in some localities cropped very well. It seems probable, in spite of adverse reports, that Apples will be fairly plentiful after all for a time, but we shall find them scarce and dear at the close of the year. Pears, too, vary very much, the earliest and most common forms being plentiful, whilst the larger and best ones are scarce. Plums and Damsons are almost a failure. Seldom have there been fewer of these stone fruits. Apricots have been thin, but Peaches, Nectarines, and Cherries are, or have been, fairly abundant. Bush fruits, too, have been pretty plentiful, the thinnest crop having been Black Currants; Gooseberries have been the best. Raspberries also have been abundant, and the Strawberry crop was far more abundant than was at first anticipated would be the case. Walnuts vary, from some trees absolutely fruitless to others elsewhere full of fruit, and small Nuts are in the same category.

The vegetable crops have on the whole been good, though in shallow soils drought has told adversely. Potatoes late, are yet robust and healthy on deeply-worked ground, and so far there is little evidence of the disease. The early ones have quite ripened and present a very fair tuber crop. Peas have been very good, and mildew has given little trouble; in many directions fine crops have been obtained. Runner Beans have suffered from lack of air and root moisture, and bloom has fallen, but that has now been checked. Onions have never been finer or cleaner than this year. Beets and Parsnips are capital and clean,

but Carrots are only moderately good and the foliage is rusty. There is neither Onion maggot nor Celery fly anywhere this season.—A. DEAN.

**Waddon House, Croydon.**—Fruit and vegetable crops in this district, as a whole, have been unsatisfactory, the late frosts and hot, dry weather being very unfavourable, as the subsoil is very bad as a rule. Apples under average. Pears very few. Peaches and Nectarines over average and good. Gooseberries average. Currants under average. Strawberries about average in the district, although mine were under, owing to all the early fruit, also bloom, being cut off with frost on May 13.

Vegetables have been very good, especially early Peas, Beans, Cauliflower and Cabbage.—J. HARRIS.

**Strathfieldsaye, Hants.**—The fruit crops in this neighbourhood are fairly good. Small fruits have been plentiful and good in quality. Strawberries extra heavy crops of even-sized berries, of first-class flavour. Raspberries a full crop, especially Superlative, which is a vigorous grower and heavy cropper. Magnum Bonum is also a fine yellow Raspberry of extra flavour and good cropping qualities. Black Currants have been fine in size and crop, such sorts as Lee's Prolific and Black Naples doing best. Red Currants have also been a full crop; the sorts which do best here are Red Dutch, Mammoth, Fay's Prolific. Of White Currants, the best crops are got of White Dutch, White Versailles and cut-leaved White Dutch. Gooseberries have not been so heavy a crop as usual in this district. Cherries on walls and standards have been very good, the fruit clean and good in flavour. Plums and Damsons are a light crop and the fruits poor. Apricots are an average crop. Pears are rather a thin crop, but the fruits are swelling into a good size. Apples are also under an average crop; Lane's Prince Albert, Duchess of Oldenburg, Blenheim Orange and all the Codlin types are good. Nuts are plentiful and good.

Vegetables are an extra good lot, especially where watering has been attended to. Potatoes are a heavy crop, free from disease and of first-class quality. Peas have been fine, especially Boston Wonder, Ne Plus Ultra, Duke of Albany, and several of Sutton's Marrowfat Peas have done well this year. Cabbages have been plentiful and good. Onions, Carrots, Leeks and Celery are good crops, and now rain has come winter vegetables will soon fill their quarters. Our rainfall for January was 2.37; February, 3.84; March, 4.65; April, 1.53; May, 1.14; June, 2.04; July, 1.67. Total, 17.24.—J. W. McHARTIE.

**Wyeombe Abbey.**—The crops of Apples, Plums, Damsons, and Cherries are very short in general. Peaches and Nectarines an average crop. Pears above an average. Bush fruits generally are an average crop, although in some places there was a deficiency of Black and Red Currants. Nuts are very abundant, and Walnuts a fairly good crop.

All crops of vegetables are excellent this year, the Potato crop being exceedingly good, and at the present time but very little disease abounds in this locality.—G. T. MILES.

**Wakehurst Place, Haywards Heath.**—The fruit crops in these gardens have not been good. Apples showed well for bloom, but, on the whole, there is a very irregular crop. The best are Early Red Margaret, Red Quarrenden, Cox's Orange, Ribston Pippin, Worcester Pearmain, Lord Suffield, Warner's King, and Sandringham. Pears are very poor, and Plums on walls much below the average. Cherries are not extensively grown, and the crop is poor. Strawberries have been a fine crop and of good quality. Royal Sovereign and John Ruskin are carrying fine crops, but I much prefer the former. Raspberries are good average, but soon past owing to the drought. Gooseberries below the average. Red Currants good, also Black. Nuts are an abundant crop, and Walnuts very good.

Vegetables have done very well, except Cauliflowers, which have been almost a failure. I

have found the following Peas succeed best: Early—Sutton's May Queen, Veitch's Chelsea Gem. For succession, Prodigy, Criterion, and Maincrop; and Ne Plus Ultra for late use. Potatoes are good, and quite free from disease.—A. DREWETT.

**The Gardens, Stoke Court, Slough, Bucks.**—Apples and Plums are a poor crop with the exception of one or two kinds. Pears are about half a crop, Marie Louise, Beurré Bo-cé, and Doyenné Boussoch being fairly well cropped. Cherries half a crop, but good fruit, both Morellos and sweet Cherries. Peaches, Nectarines, and Apricots are very good, trees healthy and fruit fine. Waterloo and Amsden June I sent to table July 15. Red, Black, and White Currants very good. Raspberries and Strawberries excellent. Gooseberries very good. Nuts abundant and good.

Peas have done wonderfully well. Beans, Runner, French, and Broad, have done well. Carrots, Onions, Parsnips, Beet, Artichokes are good. Potatoes excellent crop, and free from disease at present. Cabbage, Brussels Sprouts, and Broccoli are very much affected with club at the root.—F. W. BEEVERS.

#### EASTERN.

**Livermere Park Gardens, Bury St. Edmunds.**—The fruit crops generally this year are light, though there are no absolute failures. The irregular way in which Apples and Plums are fruiting is curious, for many trees are carrying heavy crops side by side with others absolutely fruitless. Of Apples, early varieties such as Manks and Keswick Codlins, the old Nonsuch, Devonshire Quarrenden, and White Juneating have heavy crops, as also have the old Hawthornden and King of the Pippins; Ribston Pippins are a fairly heavy crop and the fruits extra fine. Others that may be mentioned as carrying fair crops are Lemon Pippin, Emperor Alexander, and Warner's King. Varieties other than those mentioned are either fruitless or carrying a very much below average crop. Pears are a good crop all round, but much in want of moisture. Peaches and Nectarines on a south wall were blistered almost to death and the crop is very light; on a west wall their condition is much better. Plums on walls are a light crop, as the trees were caught by a sharp frost while in blossom, the best in this position being Washington, Goliath, and Reine Claude de Bayay. In the open some trees, notably Early Prolific, Belle de Louvain, Victoria and Orleans, have heavy crops; other varieties are very light. Damsons, Apricots, Figs, and sweet and Morello Cherries are much below the average; the latter, however, carried a tolerable crop of very fine fruits. Currants of all kinds, Gooseberries, Medlars, and Quinces are average crops. Grapes (outdoor) are a good crop, and promise to finish well. Raspberries are a full average crop; Walnuts and Filberts over average. Undoubtedly the crop of the year was Strawberries; these I never had finer and the crop was immense, as rain came just in time to swell the fruit, and during the gathering season dry weather prevailed.

Among vegetables, Potatoes in gardens have done well, but in fields the yield is poor, drought having much affected the crop. Disease appeared early here and caught one plot of Snowdrop before the crop could be lifted; only a few tubers showed the disease at lifting time, but many have shown it since, though the same variety from another plot hard by, lifted at the same time, was not affected. Onions, transplanted from boxes, are fine in spite of the drought. Tomatoes are doing well and ripening early, and the earliest with me, both on walls and trained to stakes, is Carter's Outdoor, a free-cropping, corrugated variety of good quality, and reminding one forcibly of the old Large Red, but much earlier. The root crop generally is good, as, too, is the Celery crop, but the latter has to be kept well watered. Kales of all kinds are backward, but will have plenty of time yet to make good progress, growth with

these in autumn being generally rapid. Peas, with the exception of early sowings, have not carried very heavy crops, or rather the crops on most varieties have not lasted long, but the quality has been good and insect pests not so prevalent as they were last year. Taking vegetables generally, they are very good where growing on deeply worked soil.—J. C. TALLACK.

**Shrubland Park, Ipswich.**—We in this neighbourhood have cause to remember the inclement spring of this year. Night after night we were visited with severe frost just as the fruit trees were in full bloom. The result is that the fruit crops, as regards Apples and Pears and all stone fruits in this garden, and so far as I have seen in this neighbourhood, are, with few exceptions, very light. Strawberries were fairly plentiful, but as many of the first blooms were destroyed by frost, the fruit was much smaller than usual. Gooseberries and Currants are plentiful; Raspberries scarce. Filberts, Cobs, and Walnuts are heavy crops.

As we have been favoured with plenty of sun and a fair quantity of rain, all vegetable crops are looking well. Peas have been exceptionally good. Early Potatoes are also good; quite free from disease. Since the moister weather set in on the 7th I find that disease is showing itself on the late varieties of Potatoes.—G. TAYLOR.

**Diddington Hall, Huntingdon.**—Apples very thin indeed. Pears a good average crop on walls, thin on standards. Peaches and Nectarines about half a crop, healthy and clean. Plums and Damsons a complete failure. Walnuts, Cobs, and Filberts a very heavy crop, the best I have had for years. Gooseberries rather thin, but fruit large and clean. Currants, both Red and Black, very thin. Strawberries a splendid crop, but soon over, owing to the excessive heat. I still find Keens' Seedling and Noble the best early kinds for preserving. For table use Royal Sovereign and Sir Joseph Paxton, and for late use Waterloo and Oxonian are the best.

Potatoes on early borders good and quite free from disease; the earliest and best was Ring-leader, followed by Duke of York. Onions sound and clean, but small. Peas, early crops extra good, late crops light and suffered from mildew. Beans an excellent crop. All the Cabbage tribe are sadly in need of a good soaking rain.—T. LOCKIE.

**Babraham, Cambridge.**—What promised to be one of the best crops of fruit of all kinds has in some cases fallen much below the average. Apples are much below. Some sorts have a crop, the most noticeable being Lane's Prince Albert. This variety seems to have withstood the frost better than any other. Some of my Apples, the above variety and Ecklinville in particular, had their buds entirely stripped by bullfinches and tits. Plums are the worst crop we have. They were a long while in bloom owing to the cold winds, and then to finish them off a sharp frost appeared after rain. Victoria, Rivers' Prolific, and Czar seem to be the only varieties bearing. I have several acres planted on some higher ground, the trees not having been planted long, but I notice that most of these are carrying a few. Damsons are about the same as Plums. Pears are a little better. Some sorts are carrying a crop, but I find the choicer sorts have failed. Cherries were pretty good. Apricots not good, but I am of opinion the loss to them was from want of water more than the weather. Gooseberries and Black Currants are not much more than half a crop. Strawberries, Red Currants, and Raspberries were very good. Nuts very plentiful. Quinces I never have seen so scarce as this year. Peaches and Nectarines are, as usual, carrying good crop. Of course the trees are always protected from frost when in blossom. I had Nectarine Precoce de Crocels ripe end of July on walls.

Tomatoes are doing well this year; Sutton's Perfection and Best of All are excellent. Vegetables of all sorts have done well. Peas I have never seen do better; the crop on Earliest of All was wonderful. Gradus is a good second early;

for a later variety Sutton's Peerless is a splendid sort, the flavour being excellent, and Veitch Extra Marrow is all that one could desire. These varieties only growing about 3 feet must take the place of all such kinds as the Duke of Albany. While these excellent varieties are of the very best quality I hear complaints of their being too large, and Peas about the size of Sweet Peas are asked for. Potatoes are very free from disease as yet the early kinds ripened off very quickly, and the crops are not so heavy. Cabbages were very early this year. I cut in quantity end of March good heads of Ellam's. The root crops in fields will be the best seen for some years.—J. HILL.

**Hardwick, Bury St. Edmunds.**—The fruit crop around this neighbourhood cannot be considered satisfactory. It is the worst season for Apples I have known for many years. The different kinds of Codlins, Duchess of Oldenburg, Hawthornden, and a few other kinds are pretty good; still much of the fruit of those kinds is falling off through maggot, and Ribston, Blenheim Warner's King, Court Pendu Plat, Fearn's Pippin, and many others are almost a failure. Pears are somewhat better; the fruits are small and, I fear, will not come to any size. Apricots are few and far between. There was a good show in bloom, but the frost during April quite spoiled the prospects in our garden. Peaches and Nectarines are fairly good and may be considered an average. Early Cherries were pretty good, but Morellos a very light. Many of them fell during the storm time. Plums are light; a few kinds, such as Early Orleans, Victoria, Monarch, Prince Engbert, and Ickworth Impératrice are fairly good, but Golden Drop, Jefferson's, Goliath, and Gages are almost a failure. Strawberries have been good all round, the best season I have seen for some time. Raspberries pretty good, but fell small through the drought. The different kinds of Currants and Gooseberries are very good.

Early Potatoes were very good, but second early and the late kinds have suffered through the dry weather. I hope the rains that we have just had will not be too late to help them. The early kinds of Peas were very good, but the late kinds have suffered very much from the dry weather.—B. MARKS.

## GARDEN FLORA.

### PLATE 1134.

#### THE LILY OF THE VALLEY.

(WITH A COLOURED PLATE OF CONVALLARIA MAJALIS, FONTIN'S VAR.)

IN figuring such an exquisitely sweet and lovely woodland flower as this, no apology is necessary. There may be newer and rarer flowers in our gardens, but we certainly possess but few, if any, wild plants which are at the same time so dainty in all their ways and blossoming and there is, perhaps, no native wild flower that is so universally grown in gardens of both rich and poor all over the country as is the Lily of the Valley. We do not remember that it has ever received a first-class certificate from any society, and it seems to be one of the few plants that has escaped being figured in the embracing *Botanical Magazine*. Of course it has its usual niche in all the floras, and Hooker tells us that it is found in "woods from Moravia to Kent and Somerset, ascending to 1000 feet in the north of England, naturalised in Scotland and Ireland, flowering in May and June. Its general distribution is Europe, North Asia, and North America, and it is also met with in North China and Japan. Its chaste modes and sweetness alike recommend it to all taste

\* Drawn for THE GARDEN in Messrs. Laxton nursery at Bedford by H. G. Moon. Lithographed and printed by J. L. Goffart.

ASHEM  
1847



LILY OF THE VALLEY (FONTIN'S VAR.)



and it is perhaps a blessing that it has so far escaped the attention of those who like to improve on Nature by rearing variations in form, size, or habit, or colour. It is essentially monotypic; there is nothing in the whole world of plants quite like it, its nearest relatives being the twin-leaved *Smilacina* and the graceful Solomon's Seal (*Polygonatum*). The plant certainly does vary, but it is within very narrow limits, the range of its variation being in inverse proportion to its extensive geographical distribution. There are tall and dwarf, broad-leaved and narrow-leaved kinds, and some forms are a little earlier or more sensitive to artificial heat than others, this depending to some extent on the climate and soil in which the roots or crowns are, or have been, grown. There is a giant kind with semi-double flowers rarely seen, there is a poor and puny rosy triple form, and a kind having golden yellow ripens on its foliage. Commercially, the plant is become of late years very important, and especially since Mr. Jannoch, of Dersingham, (tr. T. Rochford, of Turnford, and other growers of its flowers for market have made of such a gigantic speciality.

In Germany the culture of Lily of the Valley is an industry of considerable magnitude, and the Berlin "crowns" are considered finer than the French or Dutch-grown produce, and these are most largely cultivated by all the extensive growers. The forcing of Lily of the Valley for its flowers has proved so remunerative, that refrigerator chambers have been in some cases utilised in retarding the crowns, with heated forcing pits to forward their growth, and in this way it is now quite possible to produce plenty of flowers every day in the year if need be instead of merely during the two or three spring months when it was formerly in season. The ground and climate near Berlin seem particularly well suited to the culture of this plant, and it is curious to note that the Berlin crowns are valued far more highly than are those from Hamburg and other localities.

The best varieties are Berlin, Dutch, Victoria and Wallace's, and even the common wild types soon improve as grown in the Berlin soil. By the best crowns stout spikes of from fifteen to twenty-five bells are produced. As we have said, but little, if any, attempts have been made to improve the Lily of the Valley from seed. As a rule it increases vegetatively by its numerous underground stolons, but now and then, as at Traffan, Kildare, and elsewhere, spikes of soft permilion berries succeed the snowy flowers and open good seeds from which some variations might naturally be expected, not but that the plant, as wild or as well grown, is beautiful enough as it is. The following account by Mr. M. Wakefield in the *Spectator* of June 5, 1897, of the Lily of the Valley as still existing on the acre in the woods of Arnside Knott may interest those who have never seen this plant so happy and luxuriant in its native haunts, woodland and wilds.

The woods where this fairy-flower has elected to dwell in such profusion cover perhaps three or four hundred acres of ground, and the beds of Lilies are literally all over them, spreading in patches from a quarter to a whole acre. Above them grow the Nutwood, the Dog Rose, and the Bramble, while here and there the Firs and Yews give the scene a quiet distinctive dignity. Below the trees there is nothing but cool, broad, shady lanes and the little bells of the "Maiblume," as the Germans call our Lily:—

The stooping Lilies of the Valley  
That love with shades and dews to dally,  
And bending droop on slender threads  
With broad hood leaves above their heads,  
Like white-robed maids in summer hours,  
Beneath umbrellas, shunning showers.

Not a sound can be heard except the bird's song; verily a place to dream in, and perhaps it is true, as is said, that the scent of the Lily of the Valley has a narcotic influence, for fancies and imaginings take possession of one's scent-soothed soul. The Lilies seem a cool, pure world of themselves; far away, indeed, are the stress and turmoil of the real world, for at this moment nothing seems real save acres of Lily of the Valley—at any rate, for half an hour! Through a cutting in the wood the mighty and well-beloved outlines of the hills stand clearly against the horizon from Coniston Old Man to Kentmere. Helvellyn, Fairfield, and Red Screes rear their heads straight in front of us. Mountain peaks in the distance, and Lilies of the Valley all around us, verily "a sight for a sair cen." We do not need Gerarde's famous dejection of the blossoms, which he says is "good against the gout and comforteth the heart;" the comfort enters into us with the sight of the fells and the scent of the flowers. We make no dye from our lovely Lily leaves, beautiful colour though it be. We distil no famous aqua aurea from their bell-like flowers to preserve us, as in olden days, from contagious maladies; the Lily beds of Arnside are just the joyous playground of children and a dreamland for their elders. And the tide covers the golden sands with its deepest blue of southern hue, the birds are quieting one by one, while the Arnside Lilies, as the old sixteenth-century herbalist put it, "comforteth the heart."  
F. W. BURIDGE.

## THE WEEK'S WORK.

### HARDY FRUIT GARDEN.

**STRAWBERRIES.**—Planting should be brought to a close as speedily as possible, especially if these plants are expected to give returns in the shape of a crop of extra fine fruit next year. Keep the hoe at work amongst previously set-out plants to prevent weeds from growing, and pinch out runners as fast as they appear. Should September prove warm and dry, these plants will make good headway and growth must not sustain a check through dryness at the roots. The training up of the remainder of the old plants should be brought to a conclusion, and a mulch of manure used between the rows at the first opportunity that offers. Red spider has been so rife among plantations this year, that it is necessary, where a wholesale cutting away of the leaves has had to be done, to induce the crowns to make a fresh crop of leaves as speedily as possible. This the mulch and the effects of the copious rains of the past fortnight will speedily bring about if attended to at once.

**WALL TREES.**—These should have a final look over as far as regards pinching and tacking or tying in, as the case may be, for little growth will be made after this date. Where too much wood has been laid in a tree, no matter what kind of fruit it may be, thin it out at once and give the remainder a better chance of becoming thoroughly ripened. Peach and Nectarine trees bearing but scanty or no crops at all should, if they have made an abundance of wood, be kept drier at the roots. Artificial watering had better be discontinued, and to induce the trees to ripen their wood properly, remove the mulching from the alleys so that the sun's rays can have free play on the border. Trees which have made extra strong growth should be root-lifted, but of this more anon.

**GENERAL WORK.**—The heavy rains which have fallen of late have saved much labour in the shape of watering, and all fruit trees without exception will be sufficiently moist at the roots for some time to come. In districts where the rainfall has been slight, especially if the soil be light, watering will still need attention, and all trees bearing heavy crops should have all they require. In woodland districts, netting of choice Pears and Apples will have to be done, as tomits are extremely numerous and destructive this season. This is easily managed in the case of walls, but it

is not so easy a matter with bush trees; nevertheless it will be the only means of saving the fruit where these destructive pests prove troublesome. Shooting them is an effectual remedy, but they keep so close amongst the trees that it is almost impossible to hit them without damaging either the crop or the trees. Take nets off Gooseberry and Currant bushes as fast as they are cleared of fruit and store away for future use when dry. Attend to the ingathering of fruit, especially Pears and Apples of the earlier kinds. A good way to ascertain when they are ready is to lift one or two of the fruits with the hand, when if the stalk parts readily from the tree, gathering may be done with safety, and none should be gathered unless they do so. The warm rain has had the effect of causing myriads of weeds to spring up in fruit quarters as well as other parts of the garden, and they must at any cost be kept under. The hoe should therefore be kept at work, and if the showery weather of the past few days continues, the quickest plan is to rake the weeds off, as the roots will only catch hold again if left on the ground. Note should now be made of actual requirements in the shape of fruit trees and bush fruits for the coming autumn, so that orders may be placed early in the nurserymen's hands when a personal visit and selection of trees cannot be made. This greatly facilitates matters, and the purchaser can then depend on his trees being despatched as soon as lifting can be done with safety.

**LIFTING AND TRANSPLANTING.**—Where this has become necessary, either through unfruitfulness consequent on rank growth, or from want of vigour through being planted too deep, or from poorness of soil, or through crowding, necessitating the removal of every tree planted too close together at the outset, it may be carried out either towards the end of the present month or early in October. Trees carrying fruit must of necessity wait until the crop has been gathered, but once that is done there need be no further delay. Trees which have to be procured from a distance cannot, of course, be lifted until the leaves fall, but at home it is not necessary to wait for this to occur, and so long as the trees have ceased to make growth, the fact of their retaining their leaves is an advantage, as it induces the roots to send out new fibrils at once, with the result that the trees are partly re-established before winter sets in. The great aim in practising lifting with regard to unfruitful trees is to check exuberant growth, which leads to the production of fruit-buds in lieu of a superabundance of wood-buds, and once the trees are brought into subjection and made to bear fruit, the very fact of their bearing generally prevents them from getting out of bounds again. If lifting was only more generally practised we should not hear so many complaints about unfruitful trees. Lifting comes under two headings, one of which may be termed partial lifting, in which case a portion of the roots are laid bare, according to the necessities of the case, but the tree remains stationary in the same position. In the other case, or that of actual lifting, a good ball of soil must be preserved on the roots, so that the tree may be lifted out bodily and transported to another part of the garden. This point cannot be too strongly insisted on, as, unless lifted with a good ball of soil attached, the trees would suffer so severely, that it would take them two or three seasons to recover from the shock. In the first case, a trench should be opened out 2 feet wide all round for bush and pyramid trees, and in a semi-circular form for wall trees, at some distance from the stems. This distance will vary according to the size and age of the trees, but, as a rule, the trench should not be opened nearer than 4 feet, and it is but seldom that it is necessary to go further out than 8 feet, 6 feet generally being the usual distance. As the soil is removed, all roots met with should be carefully preserved and pegged back out of the way until no more are found. If there is a suspicion that the tree possesses tap roots, a drift or tunnel should be driven underneath, and when it is found, cut the root off close up to the ball. If

any other strong roots are found striking straight down into the subsoil, follow them as far as is practicable, then cut them through, and when filling in again lay them out in a horizontal position. The roots laid bare in the process of digging the trench should be examined, when all strong ones may be shortened back, and the mutilated portions of the weaker and fibrous roots trimmed off. They will then be ready for laying out afresh, either in soil of a poorer description than that in which they have been growing, if it is necessary to administer a check, or in a richer compost if it is necessary to impart fresh vigour to the tree. The roots must be laid out nearly level, and at various levels also, as the filling in of the trench proceeds, so that the topmost roots will be about 4 inches or 5 inches under the surface. In no case should any of the ends of the roots be allowed to take a downward direction, for this will only lead to future trouble, and those in charge of the lifting should pay particular attention to this matter. Before finally filling in the trench give a good soaking of water to settle the soil amongst the roots, and let it drain a few hours or a day before finishing off. When trees have to be lifted bodily and moved to another place, the same care is needed to preserve all the roots found when opening out the trench, as in the above instance. After this the soil should be gradually worked away with a five-pronged fork until a ball of soil is left from about 2 feet to 3 feet in diameter, and the roots should be pegged or fastened back out of the way. The ball must be tunnelled under and unseated before attempting to lift the mass out of the hole, and if the soil is at all loose it would be well to prevent a possible mishap by enclosing the ball in a strong mat or some old bagging and fastening it round with cords. A hole should be dug in readiness to receive the tree, so that no delay occurs, and the same rules observed in laying out the roots, and watering the soil also before finally filling in the trench, as given above. A mulch of some description, but preferably that of strawy manure, should be applied to the surface in all instances after lifting, this being a conservator of both warmth and moisture. A daily syringing of cold water for a week or two is a great help to wall trees after lifting has been done, as it freshens up the foliage and enables the trees to retain their leaves much longer.

A. W.

#### KITCHEN GARDEN.

**LEEKs.**—It is not too late even now to make a further plantation of these, where there is a continuous demand for them, as they will form a succession to those planted in trenches some weeks ago. The early batch will now be growing strongly, and soil may be drawn round the stems so as to have them blanched and ready for use by the end of October. If the roots are required for exhibition they should be fed up with frequent waterings of liquid manure. Few plants absorb more moisture from the ground than these; therefore it is almost impossible to over-water them when there is an absence of rain.

**CELERY.**—Recent rains have improved this crop wonderfully, the foliage being of good colour and so far free of disease. Continue to draw more soil round them as growth develops, it being better to do this piecemeal than burying them with a great depth of soil at one time. There is a danger of the early lot running prematurely to seed, owing to the check received during the dry weather. Where there is a danger of this the plants should be used up at once, or it will soon become useless.

**GENERAL WORK.**—Beyond making the usual sowings of Cabbage, Spinach, Turnips, Lettuce, and Endive, September is considered a quiet month in this department, but there are few gardens in which much of the winter's work might not be pushed forward with advantage, especially in backward districts and where the ground is naturally of a heavy nature. In some gardens the ground is so retentive that, unless it is turned over before it is sodden by autumn rains, it is late in spring before it is in a fit condition to do

so, and much valuable time is lost in getting in the different crops. The sooner such ground can be turned over, when present crops are cleared off, the better, as it gives a long season for exposure to weather and is the more easily worked in the spring. The present is also a good time to prepare different composts for dressing the ground as it becomes vacant. Ashes produced by burning garden rubbish of all kinds, mixed with soil that has accumulated from different sources during the summer, are more suitable for some soils than farmyard manure, and now is a good time to prepare this for winter use. In the case of ground cleared of spring-sown Onions, we generally clear the surface of weeds and give it a good sprinkling of gaslime. This is allowed to remain on the top most of the winter before it is dug in, when it is sown with the same crop the following spring, and we have little trouble with maggot. Besides having made a late sowing of Parsley for standing through the winter, we have recently cut all the main lot over, as the foliage being gross, it could not withstand bad weather. The new growth will be more sturdy and will not turn yellow like the former after a lot of rain and snow.

RICHARD PARKER.

### ORCHARD AND FRUIT GARDEN.

#### FLAVOUR IN EARLY APPLES.

THOUGH of late years there has been a considerable number of new Apples added to the list of these early fruits, we have failed to get good quality, as most of them are second-rate, and a small percentage not worth growing, if flavour is considered. Last year I was much surprised to see Worcester Pearmain given a first prize for flavour: doubtless the dish in question was staged under advantageous circumstances, and may have been the best, but certainly such was not my impression. I would at any time prefer an Irish Peach, the old Devonshire Quarrenden, and Duchess of Oldenburg to the Apple in question; but, as everyone knows, tastes differ. Still, although the Worcester Pearmain may be a good market fruit, it certainly cannot be classed as one of first-rate quality. Doubtless its free-fruited qualities have made it a favourite, but I am sorry to see it recognised as a sort deserving of special merit, in the way of prizes for flavour, when there are so many superior. I think the newer Lady Sudeley, if gathered at the right moment, far better as regards flavour. This has a brisk, refreshing taste, with a spicy aroma, which is lacking in the one noted above, and the newer variety is most handsome and the tree a rapid grower. With me it has never failed to fruit since the year after planting. Of course, I do not place Lady Sudeley on the same footing as Cox's Orange; indeed, there are no early Apples that one can, but if eaten direct from the tree it is not lacking in good flavour. This variety needs less pruning than some; it bears so freely on the points of the shoots, that much fruit is lost if hard pruned. A fruit much liked by some growers is the Irish Peach, but I think where Lady Sudeley is grown there is no need to plant this old variety. I admit few early Apples are superior to it in flavour, but, owing to its free cropping, the fruits are not large and do not keep long. I have noted how curious the larger Lady Sudeley grows, and the Peach is somewhat similar. Those who prefer a solid fruit will find none equal to the old Devonshire Quarrenden. This, grown on the Paradise stock in bush form, is an excellent early Apple, and does well in light or well-drained soil; on clay it is not so reliable. The usual method of culture with this variety was large standards,

but grown thus the fruits soon bruised in wind weather and then decayed quickly. Grown in the form advised and on the stock recommended the fruit is very fine, and its grand colour and rich flavour makes it a general favourite. A few words will describe Mr. Gladstone, an early showy fruit. This is somewhat like Worcester Pearmain for quality, and is very prolific on the Paradise stock, and where Worcester is grown there is no need to include the newer form, though Mr. Gladstone is the earlier of the two. We have a very showy Apple, much liked on account of its very bright colour. The fruits have a rich bloom on them like Plum, and the tree is a grand cropper and known under two names, Duchess of Gloucester and Duchess Favourite. The fruits are very shapely, though not large, and if gathered direct from the trees, are of fair quality and keep longer than some very early kinds. Another very showy Apple is Red Astrachan larger than Duchess, and, like it, beautiful, coloured and not deficient in quality for an early variety, if eaten direct from the tree. This is less valuable than Duchess if stored, as it soon becomes mealy. This is in season at this date (August 23)—rather earlier than usual. A brisk, sprightly fruit is Summer Golden Pippin, also known under the name of Yellow Ingestre, a small fruit, firm flesh a golden yellow when quite ripe, and much liked by those who prefer a solid, brisk flavoured fruit. There are, I believe, two, if not more, varieties of the Summer Pippin, a some are much larger and greener, but stock and soil will influence these fruits. The true form is a good standard fruit, and though ripe early in September it will keep well into the winter. I have not noted the value of Duchess of Oldenburg as a summer fruiter. This is a class of Apple many persons like, and is in some catalogues classed as a cooking fruit, but if grown in bush form on the Paradise stock it is well worth a place on the dessert table; the fruits are of medium size, with a brisk acid flavour. This is much liked by many, and the tree is a constant bearer and grows freely in almost any soil; in fact, it may be classed as a good town Apple, as it rarely fails to crop under adverse conditions, and is in season in August and early September. There are others—in deed there is no lack of variety—but I have noticed those noted for cropping, with the best quality and earliness combined. By growing these early varieties in bush form anyone is able to get an early supply; at the same time large quantities are not needed, and with small trees there is an early supply with finer fruits.

G. WYTHES.

**Apple Potts' Seedling.**—Further experience of this fine Codlin Apple proves that it is worthy of more extended cultivation, and should be planted by all who require cooking Apples of first-rate quality during September. The fact that in the scarsest seasons Potts' Seedling usually bears more or less fruit, enhances its value, and as it succeeds well in smoky districts in the vicinity of towns, amateurs should include it in their list. It succeeds well either on the Paradise or Crab stock. It is a great favourite in Norfolk.—C. C. H.

**Apples and Pears for pots.**—"R. K." having asked for the names of a few Apples and Pears suitable for pot culture, I have much pleasure in submitting the names of six varieties of Apples and nine of Pears, all of which I should imagine would succeed well in the climate of St. Petersburg. If I have named too many Pears, "R. K." can make a selection from the list below, and I may add that they all produce fruit of large size and of first-rate quality. When purchasing

the Pears, trees on the Quince stock should be asked for, as these give by far the best results when grown in pots. Both the Apples and Pears are arranged in their order of ripening. Six Apples: Beauty of Bath, Lady Sudeley, Washington, Melon, Cox's Orange Pippin and Peasgood's Nonsuch. Nine Pears: Beurré de l'Assomption, Clapp's Favourite, Williams' Bon Chrétien, Beurré d'Amanlis, Gratioli of Jersey, Thomson's, Beurré Superfin, Duchesse d'Angoulême and Doyenné du Comice.—A. W.

**Nectarine Early Rivers.**—This will undoubtedly become a great favourite amongst gardeners who require ripe fruit early in the year. Mr. Shingler, the gardener at Melton, thinks very highly of it, and as grown there it does equally as well as Lord Napier, so far as cropping is concerned, while it has not that objectionable habit of turning soft and rusty as if from sunstroke which Lord Napier has. Grown in a pot at Melton it has borne a good crop of fine, highly-coloured, deliciously flavoured fruit, and more trees will be planted in future. In Early Rivers, Elruge, Rivers' Orange, and Violette Hâtive we have four Nectarines ripening in the order named, which for hardness of constitution, freedom in cropping and general good quality cannot, I think, be beaten.—J. C.

**Strawberries for forcing.**—Where fruit is required in March the forwardest batches for introducing into heat during November will have been potted. Some growers are careless as to where they stand their plants, sometimes placing them on a bottom minus ashes, with the result that the balls become infested with worms, and the holes in the base of the pots stopped up with soil. Some of the most successful growers use the sides of the kitchen garden walks, placing boards, or, better still, trellises for standing the pots on. All superfluous water can then escape and a good circulation of air is secured. More room should be given as soon as the plants approach one another in growth, crowding having a weakening effect. Liquid manure diluted to about a fourth of its natural strength is a capital stimulant for Strawberries, but soon does injury if given too strong where the plants are confined to pots.—J. C.

**Peach Lord Palmerston.**—Few gardeners who have had any experience with this Peach would care to plant it where table Peaches alone are required, but where there is plenty of house room and fruits are used for sweets in the kitchen, a tree will be found very useful, as it is a capital cooking variety and a prodigious bearer. I lately saw a tree of this variety at Melton Constable carrying an enormous crop of extra large, fine-looking fruit, which Mr. Shingler informed me would chiefly be used for culinary purposes. Many have been tempted to plant Lord Palmerston from seeing a dish of it at an exhibition, only to find that they had made a mistake, so far as quality was concerned. I never grew Lady Palmerston, but have been told that it far surpasses Lord Palmerston in quality. Perhaps some reader of THE GARDEN has proved it.—J. C.

**Strawberry runners in 1897.**—Mr. Wythes recently noted how unsatisfactory Strawberry runners are this season, being not only late, but small and inferior. This, I am afraid, is the case in most places, and market gardeners will in many instances find it difficult to muster sufficient runners with which to furnish the allotted areas. I recently saw in market gardens in East Anglia large Strawberry beds which had borne fruit this year, and so bronzed and wizened were they, that scarcely any runners could be got from them. I, like Mr. Wythes, strongly advocate the system of planting a percentage of plants annually for runner production, and although in many gardens it may for want of room be difficult to do this, market growers with their larger areas could easily do it, and would undoubtedly find it to pay well.—J. C.

**Apple Devonshire Quarrenden.**—I do not think there are many young trees of this good old dessert Apple planted now-a-days, people appar-

ently going in more for the larger, softer, and indifferent keeping varieties, which, in fact, require to be eaten almost as soon as gathered from the tree. The soil and climate of East Anglia seem to suit this Apple well, and, judging from the quantities of it now being offered for sale at the various seaside towns, it would appear that some of the old trees are still yielding good crops of fruit. In light, warm soils the true Devonshire Quarrenden becomes red nearly to the core, is deliciously sweet, and will keep good for a considerable time, which is saying a good deal for an autumn dessert Apple. Intending planters should be careful to purchase their trees from a reliable firm, as there is a larger and inferior variety of Quarrenden which seldom colours up well.—GROWER.

**Apples in East Anglia.**—East Anglian orchards, in common with those in most other parts, seem to have suffered from the cold winds which prevailed in May last. In travelling through Cambridgeshire and Norfolk I noticed orchard after orchard quite bare of fruit. I learn that the show of blossom was one of the best seen for years, but that it succumbed to the bitter blasts of spring, which were actually worse than frost, crippling the fruit in its infancy, so that where trees did hold their fruit in the first instance most of it fell later on. The majority of the trees one sees with fruit on appear to be small, old-fashioned varieties, having extra good constitutions. Plums are equally as scarce, fruit of what appeared to me to be the old Orleans selling in Norwich for 6s. a stone. Altogether this great scarcity will be keenly felt both by growers and consumers.—GROWER.

PLUM NOTES.

ALTHOUGH the Plum crop as a whole is a decided failure, and there are stretches of wall with absolutely no fruit to be found, several of the best kinds are bearing fairly well and a supply of fruit has and will be available alike for dessert and ordinary cooking, the failure being in the large quantities usually supplied for preserving. I have both Rivers' Early Prolific and Early Favourite, and recommend the latter. It is quite as early as Prolific, an equally sure cropper and a decidedly better Plum, good ripe fruit, if not up to the standard of the Gages, being acceptable for dessert very early in the season. I do not know how it does on heavier soil; here the annual growth made is very slight; it takes the tree years to reach the top of a high wall. I have not grown Rivers' Stint. What is the difference between this and Early Favourite? The Czar is a decided acquisition, coming in just after the early and before the mid-season Plums, and no more certain cropper—not even Victoria—is to be found. As cooking Plums, to the two already named may be added Victoria, Pond's Seedling, and Pershore, the last on account of its colour and the admirable preserve it makes. I do not grow a later cooking Plum than Pond's Seedling, for the reason that Coe's Golden Drop is a great and consistent cropper, and furnishes plenty of fruit alike for dessert and the kitchen all through the latter part of the season. Where, however, a greater variety is required, Diamond and Imperiale de Milan are good cooking sorts for September and October. Oullin's Golden Gage is one of the earliest of the *bona fide* dessert Plums, and if to this are added Transparent and the old Green Gage (true), Jefferson's and Golden Drop, a few of the very best are secured. Denniston's Superb I am compelled to omit, for, although free on some soils, here it is very shy. The soil being on the light side, I am compelled when planting young trees to excavate rather deeply and fill up with the heaviest soil obtainable; a little of the same soil is put on as a top-dressing every autumn, with a mulch of manure in the spring if the weather seems likely to be hot and dry. Enemies are spring frosts, grey aphid, and blackbirds. For the first-named I manage enough fish netting to put on a double thickness, and this is generally sufficient protection unless the visitation is exceptionally severe, whilst the

same netting is utilised against blackbirds, that always commence an attack on the Plums when the small fruit is over. The grey aphid is a troublesome enemy, and multiplies faster than any other of the species. Fortunately, it is more easily killed than the black form. I think quassia extract is about the best remedy; other insecticides may be even more efficacious in the way of sudden death to the fly, but the great point about the quassia is its safety. In the hands of an inexperienced workman an extra dose will not be detrimental to young shoots or foliage.

E. B. C.

BLACK CURRANT MITE.

Will you kindly inform me if there is any remedy for the Black Currant bud mite? My bushes are badly infested.—R. H.

\* \* \* The Currant bud mite (*Phytoptus ribis*) each year becomes more destructive, and unless drastic remedies are applied Black Currants will soon be a thing of the past among many market growers. It used to be considered one of the most profitable fruits to grow, but, owing to the bud mite, farmers of my acquaintance have had good reason to think differently of the value of Black Currants, and have cleared whole breadths of bushes off the ground. All classes of growers are strongly advised to keep a close look-out for first attacks and to take measures for the prevention of the spread of the mite. The mites are so small as to be undiscernible to the naked eye, a powerful lens being needed to see them, yet if they take possession of the buds they arrest natural development of growth, an abnormal swelling of bud taking its place. In the spring when it is seen, a certain number of buds fail to burst into growth, and are much swollen. The shoots bearing these should be cut off and burnt, or if there is only a bud here and there affected, these only may be removed and burnt. Neglect or fail to persevere with these precautions and the time may arrive when the bushes will be so badly infested by bud mites as to be quite worthless, and only fit for a bonfire. Owing to the protection afforded by the bud scales, there is no reaching the mites after they are once in possession, but experts give remedies of a preventive nature. The best of these is a preparation of soft soap, soda, and sulphur. Dissolve 4 lbs. of soft soap by boiling in eight gallons of water; boil 8 ozs. of caustic soda and 1 lb. sulphur in a gallon of water, then mix all together and boil gently for about half an hour. When wanted for use add twelve gallons of water, heating and applying it at a temperature of 100°. Spray the bushes with this preparation in November and again in February, doing it thoroughly. This, coupled with the timely removal of all swollen buds that are seen, will rid the bushes of the mites. I should also advise "R. H." to start a fresh plantation with young bushes from an untainted source, and on ground well away from the affected bushes. If his remedial measures prove of no avail he will then have his new clean bushes to fall back upon.—W. I.

**Mulberries.**—These, in common with the majority of fruits, appear to be scarce this season, and, even where trees are carrying fruit, much of it is deformed and small for the time of year, and will never swell to its normal size. Many have no idea of the richness of Mulberry jam, and it is a great pity that more young trees have not been planted during the last half century to replace those that are fast disappearing. A semi-shaded position suits Mulberries well, but they like a moist root-run. Those who have only a few fruits on their trees will do well to protect with fish netting, as blackbirds and thrushes will take them even while in a red unripe state.—C. C. H.

**Pear Beurre Giffard.**—In the interesting article on early Pears which appeared in the issue of the 21st, mention is not made of that most excellent dessert Pear Beurre Giffard. I do not think this variety is generally known, although it deserves to be, as, independent of its general good

quality, it does not decay so quickly as many of the early autumn Pears, Citron des Carnes for instance. Beurré Giffard is a medium-sized fruit, of handsome appearance, having a red cheek on the side exposed to the sun, the flavour being exceedingly rich and melting. It grows rather irregularly, but succeeds well grown as a cordon on the Quince. In shape it much resembles Jargonelle, and is in season from the end of August to the middle of September. It is a good Pear for exhibition on account of its extreme hardness.—J. C.

**Peaches and Nectarines in pots.**—There is a capital lot of Peaches and Nectarines in pots in one of the houses at Melton Constable, Mr. Shingler's treatment differing somewhat from that usually given. The pots are plunged in a narrow border along the front of a lean-to house, trained trees occupying the back wall. The pots are let into pans so as to prevent the roots going down into the border and encouraging rank growth, and each season all roots which grow over the sides are cut off close to the pots. The trees are left plunged all the year round and mulching annually practised. By this means the trees are kept within bounds, growth being moderate and becoming well ripened in autumn, and if necessary feeding can easily be practised. Many of the stronger growing shy-fruited varieties are rendered more fertile, while such well-known sorts as Elruge, Pine-apple, and Rivers' Orange bear so freely that liberal thinning of the fruit is necessary.—J. C.

#### GRUB IN APPLE AND PEAR LEAVES.

Would you kindly tell me what the enclosed leaves are attacked with? All my Apples and Pears on the walls are every year attacked in the same way. This season they have been worse than ever. The walls are built of hard whinstone. One wall faces south-west and one wall south-east. I have watered the trees all along in dry seasons, but never could stop this trouble. I have watered now and again with liquid manure from farmyard. Plums are never affected.—A PERTSHIRE WRITER.

\* \* This is one of the worst instances of injury done by the Pear tree blister moth (*Lyonetia clerckella*) I have ever met with. Although the popular term would imply that it is an insect pest affecting the Pear only, it has been found, as in the case under notice, that the Apple and also Cherry are liable to be attacked by it. In order to be able to cope with this insect, its life history must be inquired into. A certain number of perfect moths, which, being so small—not measuring more than one-third of an inch across the expanded wings—are never heeded, pass the winter in crevices in dry walls, among dry leaves, and such like. In the spring these deposit their eggs on the young leaves, into which the newly hatched-out grub eats its way, causing a small blister at that spot and mining round it, eating away the pulp to a circumference of one-eighth to one-third of an inch in diameter. In some instances these dark brown patches are so numerous as to coalesce, and the injury done to the leaves is severe enough to cause them to drop wholesale. While the tiny grubs are at work, or say during May, June, and the early part of July, it is only by close observation that they can be discovered, and by the time the patches change to a dark brown colour, the change from the larvæ stage to the perfect insect has taken place and fresh broods of moths are at work laying more eggs. Once the grubs have entered the leaves, nothing can be done to save the latter, and prevention must be the order of the day. Preventive measures should consist in a thorough clearance of all rubbish from about the trees, and the stopping with fresh mortar of all crevices or lurking places in the walls. This should be followed in the spring by frequent spraying of the leaves with either soap-suds, a decoction of quassia chips and soft soap, or other form of insecticide not strong enough to damage tender leaves, but sufficiently distasteful to the moths. Once a week is not too often to spray with the selected insecticide, doing it only once

or twice in the season proving next to useless. A close look-out should also be kept for any signs of the moths having done their work in spite of the sprays, and all blistered leaves found ought to be at once gathered and burnt. "A Perthshire Writer," having once inadvertently allowed the moths to get the upper hand, will have to be most persevering with his work of prevention, but may succeed in getting rid of the pest in the course of two or three seasons.—W. I.

#### FRUIT TREES ON NORTH WALLS.

I AM pleased to see A. W." (p. 139) point out the value of north walls for fruit trees, as in a season such as we have passed through, with much heat and drought, north walls are doubly valuable. I find we can secure excellent crops of Cherries from such positions—I do not mean Morellos, but the best kinds—whereas on warmer aspects in such a season, and on light soil, the fruits are soon over. I admit that a few of the better Cherries, but only a few, do not thrive as vigorously as one could wish, but these are not numerous. Many of the Bigarreans and Heart Cherries do well, and a few of the Dukes. These latter make less wood and gum more, but there is a large number to select from. North



*Stapelia bufonia*. From a photograph by Mrs. McDonell, Edgware Road, London.

walls in favoured localities are too useful for growing merely Morellos. I note "A. W." advises Plums, and these do better on this aspect than on a warmer one in certain districts. I am aware there is less protection in the spring, but when once the crop is set the after growth is much cleaner, as on a warmer wall the trees are frequently badly attacked by fly and difficult to keep clean. Most of the Plums will do on a north wall; in fact, they like this position during July and August, and there is a great gain in retarding a portion of the crop grown in this way. "A. W." fully notes the advantages of Plums grown thus, and I may add Pears also, as I find this year our best crops are on a north wall. In places where Apples of the best quality are needed for dessert, I have seen very good results obtained by utilising a north wall. Treated thus, special culture may be given, and thinning is a simple matter. If cordon Pears are grown, it is well to plant the free-growing early kinds, if the situation is

exposed, and strong plants. The best crop of Gooseberries I ever had was grown on a north wall 8 feet to 9 feet high, with the trees trained as double cordons. When once the top of the wall was reached these gave little trouble beyond spurring in and netting over to protect from birds. Grown thus the trees give us fruit for weeks after those in the open were past, as they last well if trees are kept close in to the wall. No matter what variety of fruit is grown, it is well to keep the trees close to the wall and give shelter in the way of a good coping if possible. G. WYTHES.

#### THE CARRION FLOWERS.

(STAPELIA.)

THE genus *Stapelia* is an extensive one, as sixty or more species are known, but many of them are not in cultivation. Except in botanic gardens or in the collection of some specialist, they are rarely seen, one objection to them being the unpleasant odour of the blossoms, which is exactly like carrion, and, the petals being thick and fleshy, they often become infested with maggots after being expanded a few days. Nearly the whole of them are natives of South Africa, and consequently they require greenhouse temperature in this country, with a dry atmosphere during the winter months. They are not deep rooting; hence the pots in which they are grown should be thoroughly well drained, or pans may be used for their culture. Sandy loam, lightened by an admixture of leaf-mould and brick rubble, will suit these Carrion Flowers exactly, and during the summer they may be watered with moderate freedom, but in the winter greater care must be exercised, for it is not advisable to parch them up, while an excess of moisture is likely to prove fatal. Notwithstanding the fact that *Stapelias* are no longer popular at the present day, they are wonderfully interesting and, in a way, beautiful their quaint starfish-like flowers being, in some cases at least, marked in a most remarkable manner. One species, *S. gigantea* claims a place among the wonders of the vegetable kingdom, as the comparatively huge blossom is shaped like a five-pointed star, foot or more across, and the marking is equally strange. The ground colour is a pale tawny yellow, marked in a zigzag manner with reddish transverse bars, and the entire flower is densely covered with hairs. Its odour is a vile as any of the others, so much so that when in bloom it must be covered with a bell glass in order to allow of a near inspection of the blossoms, or if stood on a shelf with a ventilator overhead the stench is a good deal lessened. This *Stapelia* has flowered several times in cultivation, and a first-class certificate was awarded it by the Royal Horticultural Society in the autumn of 1891. It is the only member of the genus that has ever received such recognition. *S. bufonia*, whose general appearance is well shown in the accompanying illustration, is a much smaller flower than the last, but strangely marked, as the specific name of *bufonia* (toad-like) would imply. Other species that may be mentioned are *S. Planti*, *S. pulvinata*, *S. primulina*, *S. Asterias*, *S. variegata*, *S. Simsi*, *S. grandiflora*, and *S. deflexa*, of which a characteristic illustration was given in THE GARDEN, January 30, 1892. A great many of the Carrion Flowers were introduced during the latter years of the last century or the earlier ones of the present. The general appearance of the *Stapelias* when growing would suggest a near relationship to the Cacti or Euphorbias, instead of which they are allies of the Hoyas and other Asclepiads. H. P.

FLOWER GARDEN.

BORDER CARNATIONS.

"Many men—many minds."

Northern gardens Carnations are now at their best, making a glorious show in borders when boldly massed, and still more delightful when planted in raised beds, so that the long flower-stems may fall over, garlanding the stone or the woodwork with a flowery drapery rich in colour and redolent of spicy odours. No flower has been more killed by kindness, or, to say, than the Carnation, for the florist has taken it in hand and reduced it to his standard of uniformity, till half its charm and more than half its beauty have been smoothed away. Year by year it is very instructive as well as interesting to buy some of the many varieties which are so loudly praised, either to show or by their raisers, and (were it not rather expensive luxury) to watch the seedling out, both by death and by the deliberate pulling up as worthless, of at least three-quarters of these dearly-bought novelties. It is curious to notice how indiscriminate the praise of some folk is. They lump together the most delicate florist's flower with a bold border variety, till none but the most expert can understand how such failure will result from following such a selection, or rather, I might say, conglomeration. Individually, I have a horror of the prim florist's flower as a border plant. It is all very well "pulled" out and dressed for exhibition after having been specially grown and severely shrouded in order to impart special vigour. But, just plant one of these show beauties in the open garden, and see the result! The wonder is that so many still grow the Carnation at all after having been so bitterly disappointed. Were it not for the robust vigour of Cloves and beds of seedlings, we should hear, I fear, little or nothing of this fragrant flower. It rejoices in the cool northern air, and prefers the freest breath of heaven to the sheltering sufficiency of suburban gardens. In such a season as this the Carnation is peerless in the north, where no black thrips destroy the beauty of the opening petals, and where drought is not felt so keenly as in warmer soils and situations, and we may well be thankful for its beauty. First and foremost of the borders come the fragrant Cloves in each three-year-old clumps, laden with heavy flowers, which show to greatest perfection if grown in big boxes on the top of a Jasmine-covered retaining wall and allowed to hang down, mingling their sweetness with the stars of the white Jasmine. In Spain, in the Magdaine, in Italy, and along the Riviera this plan of growing Carnations is so common and so much admired, it is always a matter of wonder to me that it is never adopted in England, where they will do quite well, and brave severe winters fully exposed when once established.

To my mind, the proper definition of a border Carnation is one that will endure for at least three years in the same place, and give an increasing abundance of flower.

This cuts off nearly nine-tenths of the varieties catalogued, because there is no need to recur to nurseries in order to renew one's plants. There is no doubt a strong temptation to nurserymen to grow varieties that require special attention, but I think that when once a good collection of hardy border Carnations is established, the amateur will readily experiment with new sorts, in the hope he may find something which will make a permanent addition to his borders. To-day I will not talk more about old favourites, but note down the behaviour of various newer Carnations which will, I think, remain in our gardens. There are many gains, especially in selfs and yellow grounds, but fragrance is sadly deficient in most, so that I hail with delight a specially sweet white—Mrs. F. Gifford—which should be worth a trial, from all accounts. Three years ago I was much fascinated by a yellow ground with pink tips called Cowslip, which has proved an excellent border variety. This year there are two others—one, Voltaire, and the second, Eldorado, deeper and fuller in colour. Of these, for gardening purposes Eldorado is much the better, strong and sturdy in habit and most telling in a border. Voltaire is the nearest to the florist's model, and intermediate in colour between Cowslip and Eldorado, and apparently a more delicate variety, so that, personally, I should discard Voltaire and grow Cowslip and Eldorado. The Dey is another yellow and red Carnation, but muddily in tone, to my fancy; it is good in habit and thin in petals. Cardinal Wolsey, Sir John Falstaff and Geo. Cruikshank are all deep tones of red and yellow and good border plants, but they do not specially appeal to my sense of beauty. The much-praised yellow ground Mrs. Sydenham is quite worthless as a border plant. Of apricot shades, there is one (Winifred) which seems a great addition to the border; it is excellent in habit, apparently hardy, and bears abundant flowers, delightful in colour and shape. Pasha comes next to it in excellence, and Nabob, The Hunter, Carolus Duran and Mrs. Hole are all a long way behind in a border. Of pure yellows, there is still nothing that surpasses Germania, which does so well here on a bank where no winter damp can linger; but the robustness and freedom of Duke of Orleans make it useful, and the number of secondary blooms down its long straggling flower-stems is remarkable. Hanging over the edge of a retaining wall, Duke of Orleans, Hayes' Scarlet and Mephisto make a brilliant mass greatly admired by visitors. Neither Corunna nor Miss Audrey Campbell are improvements in any way, as far as my experience goes, but their lemon-yellow colour is pleasing. Of soft pinks, Duchess of York is the best here, promising to make a good mass, but Burn Pink (or Duchess of Fife, as it is often called) is so bad to beat that I am content with it. Of scarlets, Sweet Brier is good, and so is Paradox and several others. King Arthur is always the most wonderful flower in the garden, but it is not a true border variety; it needs annual propagation and is

particular in its requirements. Still, it is so grand, it is worth a little extra trouble. So far as I have seen, there is no dark border variety to come near Mephisto. Uriah Pike positively refuses to grow outside with me, and Duke of York is not so rich in colour or so vigorous. White and rose-coloured border Carnations are so abundant, that it is hard to say this or that only should be grown. Still, I must say that a three-year-old plant of Ellen Terry is a joy and a possession; the huge white flowers are so abundant, the growth so vigorous, and on old plants the blooms are more refined and often do not split at all, so that it improves with age, like good wine.

Of fancies, I can only say "everyone to his or her taste." Few of them can make effective border plants, but now and then the quaint mixture of colours appeals to someone's sensibilities, and among a good batch of seedlings there will always be one or two worth keeping for one's own garden, if not worth putting into commerce.

E. H. WOODALL.

*St. Nicholas House, Scarborough.*

NOTES ON HARDY PLANTS.

*Sedum hirsutum* is more like a miniature *Sempervivum* in the arrangement of its foliage, and thickly beset with distinctive hairs, as the name suggests, but the flowers are like the finer *Sedum*, white and starchy, with big black anthers. The plant is not only of interest because so different to other species, but it is exquisitely beautiful when in flower, though its height is less than 3 inches. It is also perfectly hardy, as I kept it going many years in the open and growing on nothing but tufa. Pigeons and other birds appear to have a preference for it.

*Azalea procumbens*.—It is when we see this in late summer, with its small leaves and twigs of such glowing colours as orange and mahogany, that this pretty creeping shrub assumes its most effective and useful aspect as a garden or rock-work plant. It is pleasing all the year round, from its neat, close habit and evergreen character, and the flowers are an additional charm, but, so far as my experience goes, in a garden somewhat low in a lowland valley the clusters of blossom are very sparse indeed. I have therefore learnt to value it for the colour of its foliage just mentioned, and with annual top-dressing of peat and sand I am rarely disappointed.

*Primula Rusbyi*.—This is one of the latest species to vegetate and flower, the latter often occurring in the present month. As regards its propagation, it is easy enough if done with strong, healthy stock and at the right time; in fact, however strong the stock, it may not be pulled to pieces to advantage except in a leafy state in mid-summer. A fortnight ago I divided one piece, putting the offsets into little pots. I have just been to turn a few out to examine the new roots, for there was plenty of evidence of their existence beforehand. The new roots constitute clear and distinct white lines all the length of the balls, such as delight the gardener when working with precious material of this kind, and these results have come about in a fortnight. Of course the weather has been very warm and not too wet. No doubt all such hardy plants are better in every way when they are prepared to go through the winter with new and established roots under them. This is one of the most rare, beautiful, distinct, and hardy of the *Primulas*.

*Gaultheria procumbens* is now in its best form here; it has its maximum amount of character, with all its features displayed at once. The old deep green foliage contrasts with the shoots of the new foliage, which is a bronzy red. There are present the early crop of bright scarlet berries

in plenty and abundance of the waxy white bell-shaped flowers. The whole plant is only 4 inches or 5 inches high, but it forms an effective vari-coloured object without a single fault of any kind when well grown, which is easy enough to do in a half loam and half peat soil on the flat, where plenty of moisture can find it.

**Sedum corsicum.**—Without flowers, how very effective a group of this is when resting on a conspicuous point in full sunshine, where doubtless it gets those conditions needful for the development of its many pleasing tints. Of course, this variety of *dasyphyllum* does not withstand our wet winters, but it may often be brought through with a little shelter from wet and may be preserved in a cold frame kept dry in winter—a little care it is well worth. J. Wood.

Woodrille, Kirkstall.

#### SPIRÆA ASTILBOIDES.

This distinct *Spiræa* was first exhibited by Mr. William Bull, of Chelsea, in 1880, and distributed by him four years later. After that it soon worked its way into popular favour, and is now to be met with in nearly all gardens of any pretensions whatever. This *Spiræa* is now sent from Holland every year in large quantities, just as in the case of the older *S. barbata*, or *japonica*, as it is often called. It is altogether a larger and bolder plant than *S. japonica*, while the inflorescence is of a creamy-white tint and more lumpy than in that kind. It is a fine subject for greenhouse or conservatory decoration, but cannot be forced into bloom so early as *S. japonica*; indeed, it is most effective when simply protected under glass and brought on without any severe forcing. Out of doors, too, it is very attractive, a moist nook in the rockwork or some such a spot being just the place for it. When fully exposed, the young foliage is of a distinct bronzy tint, which imparts a very pleasing feature to the plant and contrasts markedly with the creamy-white blossoms. In 1891 a *Spiræa* was sent out by a Belgian nurseryman under the name of *S. astilboides floribunda*, and announced as a seedling from a plant of *S. astilboides*, which had presumably been fertilised with the pollen of *S. japonica* growing in close proximity thereto, and such is doubtless correct, as the newer kind is in general appearance about midway between the two. The foliage partakes largely of the characters of the two species, as the leaflets are larger and rougher than those of *S. japonica*, and at the same time they are of a much brighter green than *S. astilboides*, and do not become bronzed by exposure. The inflorescence is more in the way of *S. japonica* than the other, being more erect and of a whiter tint than *S. astilboides*. It is, however, a larger growing plant than *S. japonica*. This *Spiræa* received an award of merit from the Royal Horticultural Society in 1894. Both *S. astilboides* and *S. astilboides floribunda* have figured prominently at many exhibitions, grand masses having been several times seen at the Temple shows. H. P.

**Tufted Pansy Duchess of York.**—A few weeks since a note appeared in THE GARDEN with reference to a variation in some plants sent to me under the name of White Duchess, but which was sufficiently distinct from any other member of the family to make careful note of. From information recently acquired it is understood to be a sport from Duchess of Fife, the sport having originated in the garden of a small, but enthusiastic amateur grower in the neighbourhood of Chingford a few years since. The stock has evidently been widely distributed, as my plants were received from the nursery of a celebrated midland grower, and now I understand the plant is to be sent out under the name prefixing this

note by a firm in the south. The flowers are pretty, with a bright bluish narrow margin, the ground colour being white with a light suffusion of yellow on the lower petals.—D. B. C.

#### FLOWER GARDEN NOTES.

SOME rather interesting combinations in the way of summer planting, noted from time to time, and quiet, pleasing and effective in the way of contrast, may serve as a guide to another season's planting. Perhaps the most striking carpet for beds of *Lobelia fulgens* vars. *Queen Victoria* and *Firefly*—if, that is, the carpet may be an annual and not a permanent affair—is *Golden Harry*

little darker than that of *Sugar Beet*, but it is hard worth growing. If when planting the *Lobelia* a permanent bed, or, at any rate, one that will last for two or three seasons, is designed, a more enduring carpet than the *Pelargonium* will be found in several of the lighter-coloured *Violas* in *Veronica incana*. If the beds in which *Lobelia* are growing are to be occupied next year by other subjects, the plants may be lifted at the end of the season and packed together tightly in boxes or frames. They should be kept under such circumstances on the dry side, and protected from very severe frost. Hardy combinations, both effective and pleasing, have resulted with the association respectively of *Montbretias* and the *Fuchsia gracilis* with *Hydrangea paniculata*



*Spiræa astilboides.* From a photograph sent by Mr. Greenwood Pim, Monkstown, Ireland.

however *Pelargonium*, the taller plants some 30 ins. apart each way. These *Lobelias* are very vigorous this year, some of the stems being  $1\frac{1}{2}$  inches in diameter at the base, and with stems of this size the flower-spike, as may be imagined, is proportionately strong. I notice that varieties differ in the deep colouring of the foliage, and it is therefore well to put a small stick or label to the best types, that propagation, if required, can be made from them, the contrast with the lighter undergrowth being much more effective. There is a variety whose foliage, from a colour standpoint, is very

The latter is exceptionally good this year; the plants had a top-dressing of some good cow manure when the Roses were mulched, the buds to which they shoots were headed back were plump and strong and the heads of flowers very fine. The *Montbretias* commenced flowering early in July and have been very gay ever since. A very pleasing contrast has followed the carpeting of the bed already partially filled with *Paj Gontier Rose* with a good dark *Heliotrope*. This *Rose* has a deservedly high reputation as an autumn bloomer; also well earns the name of *perpetua* for the bushes are very seldom without flowers. In the bud stage it is very charming alike in shape and colour and shows to great advantage again: the *Heliotrope* carpet. *Scarlet* and nearly white *Pentstemons* have made two very effective beds on carpets respectively of *William Niel* and *Mr. Bellamy Pansies*. Reverting for moment to *Heliotropes*, beds of scented flowers that are always appreciated, in which they take a part, were filled this year in a somewhat haphazard style with (besides the *Heliotrope*) *Eucalyptus citriodora*, *Aloysias*, scented *Pelargoniums* in variety, both plain and variegated, with occasional plants of *Princess Alice Stock*, *Mignonette*, and *Harrison Musk*. I am partial to these beds; there is an attraction about them that is very pleasing, and it is interesting to stay by them occasionally and try all the different perfumes. Having referred lately to the different forms of *Phloxes*, it is only necessary to add that special beds devoted to this family have been for some time as bright and attractive as any in the flower garden, and that the idea of grouping together the early and late-flowering sections has tended both to prolong the season and to do away with a certain formality inseparable with planting in quantity.

things of similar height and season. Marguerites held their own bravely this year. It seemed possible to keep the maggot in check, so far as pot culture was concerned, and to preserve healthy clean-looking plants, but all those planted have developed into nice clean bushes and are flowering splendidly. Both the white and yellow varieties associate well with different forms of Cus and pompon Dahlias, and they also do admirably as occasional tall plants for things of darker habit, such as pink and scarlet Pelargoniums, purple Petunias, and the like. Small pots are gradually being filled with suitable perennials, of which tufted Pansies, Pinks, Carnations, the dwarf Veronicas, Campanulas, &c. may be cited as examples, and others not so old are furnished with Phlox Drummondii and Noesia Suttoni. For other small beds I find the semperflorens (fibrous) type of Begonias among the best things. They resemble the best kinds of herbaceous Lobelias in that they combine deeply coloured foliage with bright flowers, and they may be used, either in a mass or as occasional plants, on a carpet of variegated Mesembryanthum or Cannell's dwarf Ageratum. Tuberous Begonias are not a success; our soil is too light and dry, despite either a natural carpet or a heavy mulching of cocoa fibre or spent mushroom manure. Constant watering might give the colour required, but our facilities in that direction are very limited. The old strains of annual Lobelias were too short lived to be serviceable, but Carter's Perpetual seems likely to prove a decided acquisition. E. BURRELL.

PERENNIAL PHLOXES.

It is to me inexplicable that in scarcely any flower show schedules can we find a class, or classes, for either plants in pots or single trusses of herbaceous Phloxes. Surely there are few highly florists' flowers that will make a more beautiful class than these would. How much I should like to see some hardy plantsman, instead of setting up one of these eternal collections of perennial flowers, which includes so many things everybody has got and is already getting tired of, putting up instead on the Drill Hall like a group of Phloxes in pots, single trusses, raised from spring cuttings, mixed with Ferns, or else on a table a collection of spikes also set up thickly in Ferns. If the collection included the best of the beautiful varieties we have so many of in commerce, I will undertake to say that such a group would create a distinct sensation. What is our average experience of the Phlox and its culture, or rather lacking it, in gardens? We see the hardy plant borders big clumps that have been there several years, and now are soon withered up by heat and drought, of few varietical and those of the poorest. They are also usually tall. The plants seem rather to be tolerated as necessary evils than cultivated for their beauty. No plant should be allowed to stand untouched more than two years from the cutting, and the should be a free propagation of the best every spring, the collection occasionally getting some additions, whilst inferior ones are destroyed. I am assured that if gardeners would but grow the plants more intelligently they would furnish to their employers objects of beauty they have in these hardy Phloxes no conception of; and if, still further, flower show committees would but offer prizes at late summer shows for twelve trusses set up in Ferns or Asparagus, and for twelve plants in pots, single stems, they would help greatly to the popularisation of one of the hardiest, yet most beautiful, of hardy plants in cultivation. Some two years ago I made a similar suggestion at one of the meetings of the Royal Horticultural Society, and Mr. Douglas, who presided, made a note of it. I have looked interestedly through the class at one of the meetings, but have not yet found it. But that knowledge of the best varieties is general is, I am certain, not the case. I could but realise this much when looking over the extensive collection just now blooming at Long Ditton; indeed, many of these

forms came as a revelation to me, and I was very thankful to be enabled thus to become acquainted with them. Not all the plants were from spring-struck cuttings; some had been divided last winter and replanted. Apart, too, from the rich and varied colours, what huge trusses and what splendid round, flat pips many had. Then as to height. There were many varieties blooming profusely, the plants carrying eight or ten fine trusses at only 15 inches in height; others were 20 inches, and others ran up to 30 inches. Thus in planting them it is well to know heights, so that the varieties may be suitably arranged. Growth elongates each year if plants are allowed to stand in the same place, and the shoots become thicker, while the elongation results from the fight after light and air caused by denser growth. It is so easy to obtain shoots from the roots 2 inches or so in length, even in March, to set them as cuttings into pots filled with sandy soil, stood in a very gentle warmth, and to root them well in a few weeks. Some may then be grown on singly into 6-inch pots, in which, being moderately fed with liquid manure, they will bloom finely, or may be planted outdoors in good soil to carry fine trusses. It is with such treatment the finest properties of the herbaceous Phlox are fully seen. Of the best varieties I noted among so many good ones were Sylphide, pure white; Flocon de Neige, bluish-white; Leonidas, bright reddish rose; and Aurore, rich carmine. These four are very dwarf, blooming at 15 inches in height. Rather taller, ranging from 20 inches to 30 inches, were Sesostris, rich rosy lake, very fine; Eclairer, rosy puce with pale centre, a huge pip and beautiful form; Okera, rich salmon-carmine; Coccinea, fiery red, pips not large, but of perfect form; Mme. Antoine Denis, an oculated form, having deep red eyes. On a white ground, singularly attractive: La Sicile, rich deep pink, flushed blue; Wm. Robinson, rosy salmon, a superb variety; Aurore Boreale, almost rich scarlet, wonderfully effective; and Regulus, carmine, shaded mauve, also a lovely variety. Many others might be selected, but these are all first-class. The novelties now range more largely amongst carmines and reds, as these are the favourite hues amongst Phloxes. The old purplish reds have largely disappeared from good collections, and striped or flaked forms find little favour. It seems only needful for gardeners or amateurs to see these good varieties to lead them to become enthusiastic growers. A. D.

**Herbaceous Lobelias.**—I read with interest the note on these showy subjects (p. 124). They are certainly effective during the autumn months, their brilliant scarlet colour being noticeable from a long distance. At Bickling they are freely used in the flower garden, Mr. Odele having them rising from varied and suitable ground, works such as blue Violets. The spikes of bloom stand a wet season fairly well, but they must be securely fastened to neat sticks, or wind soon plays havoc with them. Formerly propagation was effected only by division of the old plants, these being either lifted in autumn and protected from frost in a cold pit or greenhouse, or in light warm soils mulched with leaf-mould. Many people now, however, and Mr. Odele amongst them, raise annually from seed, and find as good, or even better results from so doing, as the fine strain at Bickling amply testifies.—GROWER.

**Zauschneria californica.**—For some days past the rock garden has been brightened by a well-maintained profusion of the flowers of this brilliant plant. It is somewhat strange how partial the plant is to some gardens and soils, growing almost as a weed in some instances and in others almost refusing to grow at all. Usually in a light sandy, loamy soil the plant grows freely, and where it does this it is one of the most acceptable of plants for the rock garden at the present season. Indeed, I know of nothing to compare with it for brilliancy of colour, and for this reason alone it is worthy of special culture. In some few instances the plant increases too freely, and in its ardour encroaches on other important subjects.

Such, however, are rare, and I do not call to mind any instance where the growth was such as to become troublesome, though I am aware of several instances where attempts to grow the plant have proved futile. A deep and fairly rich sandy loam and a warm, well-drained position in the rock garden or border is, perhaps, the best place for it, and if these prove favourable, a tuft will carry quantities of its vermilion-scarlet flowers for some time. In gardens where clay soil exists it will be found a good plant to provide it with special soil and good drainage. A tuft 2 feet across is a very striking object when in flower and not more than a foot or so high in most cases. In very severe winters a shovelful of cocoanut fibre over it will keep the plant secure from frost.—E. J.

**Tropæolum speciosum.**—A most welcome hardy climber if, indeed, as it must be confessed, it is somewhat fastidious as to soil, position or locality. In some gardens, where the old-established plantations are a feature, it is indeed a lovely plant, difficult to adequately prize at its full worth. In other gardens the fleshy roots have been planted again and again, only to fail badly, as they were not seen after. One of the surprises in this connection is the way in which the plant flourishes in some Scotch nurseries. Quite small pots will be crowded with its roots, that appear to possess enough vigour to threaten to become a most troublesome weed. In the south, however, its growth is rarely vigorous, and never sufficiently rampant for the majority of those interested in gardens. In the rock garden at Kew an attempt has been made to establish this beautiful plant, which around London, at least, requires a good deal of coaxing. Perhaps if, instead of planting the dormant roots, as is usually the case, the planting be deferred till spring when growth begins, giving a good bed of prepared soil of light material and planting freely, better results may be obtained. Frequently, when the pots containing it are plunged in ashes and cocoanut fibre, the roots over-run the sides of the pot and grow quite freely in the plunging material. At the same time, one of the best displays we have seen was in a midland garden where the soil is quite heavy, a fact which makes the soil question somewhat puzzling.—E. J.

FANCY PANSIES.

It is unfortunate that the fancy Pansy does not succeed better in the south than seems to be generally acknowledged, as its flowers are so handsome. There are few gardens in the south of England where anything like a representative collection may be seen growing, and at the same time giving evidence of their well-being in robust growth. Unfortunately, the constitution of these plants is not so good as it might be, or we might enjoy the display these flowers make in districts where the climatic conditions are more favourable, and where the more popular tufted Pansies repay us for our trouble with their wealth of bloom. It may be possible in the course of time to raise a race of plants capable of withstanding the trying climatic conditions which usually prevail in the south of the United Kingdom, and it is also probable that we may be nearer the realisation of our hopes than may seem possible to many. Flowers of the fancy Pansy of exceptional beauty and size distinguish the newer sorts sent out from the Tamworth collection of Mr. W. Sydenham, this raiser taking a very prominent position in the introduction of new sorts. A visit to the Pansy gardens in the height of the season is the best proof one can have that these plants succeed remarkably well in the midlands, the many thousands of plants, new and old, looking the picture of health, and each carrying a number of blooms typical of what a fancy Pansy should be. This Pansy is essentially an exhibition flower, and although it is difficult to approve of the flowers set up in the orthodox

fashion, one would appreciate them much better arranged in some less formal manner, and in such a way that a little artistic taste might be brought into use. Some trade growers exhibit the blossoms in sprays of six, and this is certainly to be preferred to arranging them individually on a flat tray. We want plants of free and fairly compact growth, and, combined with this, a tendency to flower more profusely. The sorts which call for special notice are

**MRS. WM. LOCKWOOD.**—This is a large flower with a deep velvety purple blotch, edged ruby and white, with top petals of rich purple and a white lacing.

**MRS. R. G. MOIR.**—Large circular bloom with velvety black blotch, laced pure white and tinted crimson, upper petals white with a broad band of reddish purple, and a thin margin of white. This is a standard variety, and should be in all collections.

**COL. M. R. G. BUCHANAN** is a very fine flower, with a dense, rich dark brown blotch with amber margins, and upper petals violet and amber. This is a very popular sort.

**MRS. BUTLER BARTON.**—This is a seedling. It has a large flower, with deep rich blackish purple blotches, edged rosy plum on a white ground, top petals a beautiful plum colour.

**MISS ISABELLE HIBBARD** is a beautiful flower, with a neatly defined purple blotch, edged garnet on a cream ground, upper petals similar to edging. A capital seedling from Tamworth Herald is

**MYOSOTIS.**—This has a rich dense blotch of violet, laced rosy white, lavender top petals, shaded rose and white. Another exquisite flower is

**STEPHANIE**, with purple blotch, edged creamy yellow.

**GLEAD** is being sent out for the first time this season. It is a very large flower, with deep rich purple-plum blotch on a yellow ground, with a very neat narrow margin all round. A very fine seedling was seen in

**MANDOLIN**, this flower having a splendid blotch of deep reddish brown colour, edged bronzy red and yellow, upper petals purple, paling off to a plum colour. This is a very lovely flower of perfect form.

**GEORGE HOSKISON** struck us particularly with its dense well-defined blotch of purple, edged a reddish plum colour, and may be considered a very fine flower. A large bloom is

**MRS. W. L. FRASER**, of good form, with dark blotches, laced pale yellow, upper petals pale yellow, streaked with bright rosy purple. One of the best fancy Pansies we have is

**MYRIE PAUL**, with large, round indigo blotches, edged pure white, top petals white, suffused with indigo. A very fine flower is

**AGNES MABEL**, possessing large circular purple blotch, with white lacing, tinted rose, the upper petals being shaded dark purple and rose. A large showy flower is

**MRS. JAMES INGLIS**, having rich deep violet blotches, edged pure white, upper petals white, veined violet. This is a very constant sort and of standard quality.

**MRS. D. P. RITCHIE** is a big flower and very fine too. The bloom has rich violet blotches, edged primrose, upper petals primrose, flaked with violet.

**JAMES C. ERSKINE** is a pretty flower, with a dark circular blotch, edged cream and shaded crimson, upper petals cream, prettily reticulated with crimson.

**MRS. W. STEELE** is considered a champion flower, being one of large size, grand circular bluish purple blotches, with cream edging, upper petals cream, heavily suffused with light purple. A fine flower named

**TOM WATTERS** is the best thing raised by Mr. J. D. Stuart. It has dense glossy blotches of purple on a red ground, the red colour forming a unique margin round the blotch and edged with rich yellow, upper petals having a band of deep maroon, shot with red.

These are just a few of the special things in the Tamworth collection, and show a most dis-

tinued advance. A few acres of these plants when in full flower are very rich in appearance, and the time is not far distant when they will be far more popular than they are even now.

D. B. CRANE.

**Incarvillea Delavayi** from seed.—This beautiful species of *Incarvillea* has with me produced a couple of seed-pods, which ripened a fortnight ago, the pods then splitting to such an extent that many seeds were visible. They were sown at once, and several of them have already germinated, and others will probably follow. The plant that produced these seeds was flowered in a sunny greenhouse and allowed to remain there till the seeds were ripe. As this *Incarvillea* can be increased so readily from seeds, we shall doubtless before long meet with it far more often than we do now.—H. P.

**Carnation Burn Pink** (syns., *The Burn and Duchess of Fife*).—It is to be regretted that this most useful of all border Carnations should have so much confusion in its nomenclature. The heading of this note is an extract from a trade list now before me, and your correspondent "J. C.," on page 146 of *THE GARDEN*, uses two out of the three names. Surely one name is sufficient, and I think I am correct in saying that *Duchess of Fife* is the name it is usually known by. The colour is a lovely pink, and it is of very robust constitution, very free blooming, and delightfully fragrant. In association with *Carnation Miss Audrey Campbell* (yellow) it is most effective.—A. J. R.

**Bedding Calceolarias.**—I was lately surprised to see in the suburbs of Norwich the yellow forms of bedding *Calceolarias* doing so well. The beds and borders in villa and cottage gardens were perfect, no trace of the *Calceolaria* disease being noticeable. I think locality has a deal to do with the success or otherwise of bedding *Calceolarias*, as in many places where the disease was troublesome the original soil of the beds was entirely removed and fresh substituted, while some gardeners refrained from the use of manure in the soil, but these measures were unavailing, and the culture of the plants was at length abandoned. Although there are several substitutes for the *Calceolarias* in flower gardens none, so far as I have seen, can equal them in brilliancy and good effect.—GROWER.

**Helenium grandicephalum var. striatum.**—Is not this plant current in nurseries under the name *H. nudiflorum* of Nuttall (see Asa Gray's "Flora of N. America," vol. i., part 2, p. 349). I have not had an opportunity of comparing specimens in the herbarium of Kew with the garden plants which I have grown for many years; but it seems to me, as far as I can judge without going into botanical technicalities, to correspond with the description of that species, the only one described by Asa Gray as having rays striped with orange. He also says that it hybridises with *H. autumnale*, and even if botanists should consider it to be one of these hybrids the name, at least in nurseries, had better be changed. The height of *Heleniums* varies so in cultivation that it is an uncertain botanical character.—C. WOLLEY-DOD, *Edge Hall, Malpas*.

**Violets.**—The present season has so far been most trying for the double section of Violets, which are being prepared for supplying bloom during winter and spring, as the drought has encouraged the spread of their greatest enemy, red spider. Where they are grown in the full glare of the sun, which is a bad practice, and not mulched or syringed regularly, the chances are that the foliage will become yellow and undersized and the crowns poor. The plants need just as much, and very similar, treatment during summer as a pot Strawberry, as if they are not fully grown, and the crowns large and prominent by September, no amount of trouble in winter will make up for it. Mulching is a great help in hot weather, yet how few gardeners trouble to give it to Violets. I always use old Mushroom

manure, which answers admirably, yet does promote a rank growth.—J. C.

**Tufted Pansies.**—Mr. Crane sends us an interesting collection of the new tufted Pansies. The flowers are beautiful in colour and form. The varieties comprise *Lavinia*, in the way of *Violet* colour of *Border Witch*; *Pembroke*, rich orange-yellow in centre, gradated to white on edge, shape and crimped edges; *Princess Louise*, the above, but more lemon in colour and not so deep in centre; *Sir Robt. Peel*, also similar, paler still (the last three mentioned are charr kinds of shades of yellow); *Celeste*, pale lavender blue; *Ethel Hancock*, a splendid white variety of excellent habit; *Jestyn*, creamy white, streaked or mottled with porcelain-blue, very free; *Lavinia*, good violet-blue; *Symphony*, violet-lavender, with bluish eye.

**Statice latifolia.**—This hardy *Statice* is gaining popularity, especially amongst those who require graceful subjects for mixing in their decoration. A cool, semi-shady position suits *Statice* well, the roots revelling in abundant moisture. A north border is a capital position although the flowers may be a little later in coming than when grown in a more sunny position. The bloom lasts well either on the plants or cut state and has a very elegant appearance, the colour being a lavender-blue. The plants increased by division at the roots, which may be done in October or November, or indeed any time during winter in open, frost-free weather. When done at the latter date it is best to put a mat of leaf-mould over the surface of the ground.—C. C. H.

**Mignonette on north borders.**—In hot summers *Mignonette* often does indifferently, owing to an insufficiency of root moisture, and difficulty often being experienced where the soil is shallow. It is a mistake, unless in deep, retentive soils, to sow *Mignonette* on south borders on any position fully exposed to the sun, as even if it comes to maturity it lasts but a short time, full beauty compared with that grown in shaded situations. I find a north border just the place for sowing on in May for a supply of blooms in August and September. If the old trusses are cut off, the plants will continue to grow and yield until frost cuts them down. Where the soil is too strong and close, a little finer material in the shape of potting-shed mixture and a little leaf-mould worked in will make matters right. I find the taller, stronger growers, such as *Queen*, better for outdoor work than *Spiral*.—C. C. H.

**Two good bedding Geraniums.**—It would be difficult to name two more attractive or more flowering bedding *Geraniums* than *Henry James* and *John Gibbons*. The former is perhaps the most extensively grown of the two; indeed, one seldom sees a flower garden of any importance without a few beds of it. The truss is very large, and the colour, which is intense dark scarlet, is telling. It has a good constitution and a branching habit, the bloom trusses being produced in great numbers. *John Gibbons*, a fine scarlet, is equally good as a bedder, so far as its form in growth and flower is concerned, though not so telling at a distance. Both these varieties should be grown where first-class bedding *Geraniums* are in demand. It is wonderful what a length of time *Vesuvius* has remained popular. There are few places in which it is not in flower, and as a dwarf free-flowering all round scarlet it is hard to beat.—C. C. H.

**Bedding Begonias.**—The present summer has not proved the best for bedding *Begonias*, having been too dry and arid; as autumn approaches, however, they will no doubt improve considerably. A cool, moist summer seems to suit *Begonias* best, their wants being quite the reverse to that of the *Geranium*, which revels in hot sunshine so long as sufficient root moisture is supplied. Much may be done to induce *Begonias* to grow and flower well even in adverse summer by incorporating with the soil of the beds a quantity of well-decayed manure; and if a pot

holding loamy compost can be spared to work in well so much the better, especially where the plants occupy the same beds two years running. Moreover, a good mulch of some short material applied early in the summer, as soon in fact as planting is completed, well repays for the labour, the roots being thereby kept in an equable condition and labour in watering saved. The pink shades are very telling associated with scarlet Carnations and Calceolarias.—J. C.

**Carnations.**—In THE GARDEN of August 7 "C. B." (under the heading of Carnation Salisbury) makes some very sensible remarks about the development of a strain of Carnations with stout stems needing no support, but it is doubtful whether it would be possible to do without the stick altogether in Carnations, for the majority must be liable to sway about at the year. What is wanted is Carnations that when cut to a short stick will hold their blooms erect. Among those that have this useful characteristic, added to its other many charms, is a fine new yellow self which was shown at the R.H.S. exhibition of, I think, July 27. It is named Mr. Moore Binns, and as I have had the good fortune to grow several plants of it on trial for a few years, I can strongly recommend it as a perfect border or pot Carnation. The flower is of good size and good substance, of a pure yellow colour, and of a strength and robustness not to be equalled by any flower of its delightful family.—S. TAYLOR, *The Gardens, Diglis House, Worcester.*

## NOTES OF THE WEEK.

**Antibretia Tigridia.**—A very beautiful hybrid form of this pretty and useful class, with compact spikes and flowers of a clear orange-yellow, with scarlet eye. It is a beautiful and pleasing variety in the border and equally so in a pot.

**Carnation Lady Hindlip.**—This variety is destined to occupy a front place in the future, the clear scarlet blossoms being of a very intense shade and of excellent form. The flowers are not remarkable for size, yet sufficiently large for ordinary purposes.

**Abelia Night.**—This is a flower of very dark colour, in fact, a deep crimson-maroon of a very heavy or intense shade. But it is also a capital specimen of the Cactus-flowered section, and as such recently obtained the award of merit from the Royal Horticultural Society.—E. J.

**Rose Empress Alexandra of Russia.**—The Roses of recent introduction are more beautiful than this, which is of a salmony bronze tone, though these words do not adequately describe the lovely shade that predominates in this beautiful flower, and which catches the eye again and again.

**Phlox banaticus** is one of the best of the globe Thistles, and now in its best form. A large clump of this kind with many of its globular heads of blue is very attractive in the rougher portions of the rock garden. In the border or shrubbery, too, it is a good and showy plant in summer.

**Tufted Pansy Norah Creina** has the appearance of being a capital sort for bedding. Its growth is compact and free, and the constitution seems to be all that is required. The flowers are of good size, lavender-blue in colour, something midway between Blue Gown and Sweet Lavender, with an orange centre and free rays.—D. B. C.

**Lymphæa odorata rubra** is a very charming and beautiful Water Lily, that should be found more frequently in lake and pond alike, and being easily accommodated in rather shallow water may be reared with ease from the margin of the lake. The brilliant colour of the flowers renders it one of the gems of the older sorts, and it may be obtained at reasonable rates.

**Rhus radicans variegata.**—This very pretty marked plant obtained a first-class certi-

ficate at the recent meeting of the Royal Horticultural Society, when it was shown by Mr. W. Bull, of Chelsea. The plant is likely to prove of considerable use to decorators, and should have some value in the greenhouse or conservatory, where such plants may be put to divers uses.

**Statice latifolia** is now very fine, more especially a few clumps that were replanted a year ago and now again fully established. In the border or the rock garden the plant is always striking when in flower—a rather extended period, as the longevity of the blossoms and the colour also are remarkable. A plant of the easiest culture that should not be overlooked in any collection of hardy plants.

**Tufted Pansy Walter B. Child.**—This is a most exquisite little flower, neat and pretty, and everyone interested in Tufted Pansies should possess a batch of plants. The lower petals are white, with a pretty margin of azure-blue, and the upper petals are azure-blue also. The blossoms are rayless and develop most profusely. It has a nice spreading habit and is a free-growing sort.—D. B. C.

**Kniphofia Lachesis.**—This is one of the most beautiful of the now somewhat numerous hybrid section of the family, the blossoms of a very pleasing and delicate shade of apricot and light orange. Among many of the newer shades this is quite conspicuous by its colour, and being free-flowering should prove a useful kind. This handsome form is among the best in Mr. Perry's collection at Winchmore Hill.

**Colchicum autumnale.**—These pretty flowers are now occurring quite freely in the shrubbery, the hardy fernery, and little nooks in the rock garden, everywhere giving pleasing results. Best of all, perhaps, where they appear in grassy spots or banks, for here the naked blossoms are clothed, as it were, as soon as they emerge from the earth. In this way they are pretty indeed, and give so little trouble.—E. J.

**Erica vulgaris Hammondi.**—Among the hardy Heaths this variety, with its pure white blossoms so freely produced on spikes 6 inches or 8 inches long, is very charming, the flowers being conspicuous for their snowy whiteness among the rather predominant blue and purple that obtains among these dwarf free-flowering shrubs. In a collection of these from Messrs. Veitch at the Drill Hall recently this white kind was indeed beautiful.

**Echinacea purpurea.**—This handsome perennial still continues to produce a fine succession of welcome flowers, welcome because of their colour in the hardy plant garden now. Planted in bold groups, we have no more useful plant at the present time. One large bed of it with the well-known Hyacinthus candicans interspersed among the Coneflower is very satisfactory, the pure white drooping blossoms of the latter displaying the Coneflower to advantage.

**Lobelia cardinalis.**—For weeks past no hardy plant has maintained such a succession of brilliant flowers as this old-fashioned garden plant. Brilliant beyond compare, though only luxuriant where moisture or a very rich soil is at hand, it is a plant to be prized for its colour at this season. Where moist places exist this is one of the best of plants, for here the stems will attain 6 feet or 7 feet high, always giving flowers in proportion. A few clumps well disposed give a very fine result.

**Tufted Pansy Mrs. Chas. Turner.**—In the trial of Tufted Pansies at the Royal Botanic Gardens, Regent's Park, this old sort looks remarkably well. Its colour, a rich and bright bluish purple, stands out so distinct from everything else, that it stamps the flower as being a very useful sort where this colour is required. The blossoms are large and the colour is a good fixed one. The habit of growth is nice and compact, and the constitution most robust.—D. B. C.

**Gladiolus Saundersi.**—Few members of this genus, even among the large number of hybrid forms that now exist, could possibly make a more effective display than this when freely grouped in

the garden. The brilliantly-coloured flowers, so freely spotted with white, are not only effective from a colour point of view, but there is a distinctness of form also that materially adds to the beauty of the freely-flowered spikes of the plant. In the Winchmore Hill district the plant grows quite freely, and as seen in the nursery beds closely planted an almost dazzling effect is produced.

**Hibiscus Mrs. Mackintosh.**—This very beautiful and showy kind was exhibited at the last meeting of the Royal Horticultural Society, when it attracted considerable attention. The specimen was some 5 feet high and carried a number of large and handsome, clear yellow blossoms of the size and colour of the large yellow Evening Primrose. It is evidently a free-flowering kind, judging by the clusters of terminal and auxiliary buds on the rather free-branching habit of the plant, and with the deeply cut digitate foliage makes up a distinct and striking plant.—E. J.

**Helenium autumnale striatum.**—This very showy perennial is now a striking feature in many gardens, and especially when the blossoms are of a crimson hue. In Mr. Perry's hardy plant nursery at Winchmore Hill some handsome clumps of it, bearing a large proportion of crimson flowers, make a most effective display. A crimson-flowered variety of this plant, which appears of a sportive nature, would prove welcome among the many composites now in flower, and an attempt should be made to fix the sport if possible. A large spray of it has all the flowers of a rich crimson shade.

**Euphorbia corollata** is one of the most elegant of flowers at the present moment, and produces a large branching panicle of small, pure white blossoms, the latter of the size of the Forget-me-not. For vase decoration it is simply charming, as is also the disposal of the much-forked branches, that carry from two to four of its blossoms on each tiny branchlet. The neat and elegant foliage is quite as attractive as the flowering, and, altogether, a plant that would prove of great service generally where such things are needed. Some good tufts of this pretty plant are now flowering freely at Winchmore Hill.—E. J.

**Tufted Pansy Molly Pope.**—This handsome flower is evidently at its best late in the season, at least so far as regards its growth in the south of England. Just now it is one of the most striking clumps in the garden, with rich and deep yellow flowers of the most beautiful description. Early in the season the centre is slightly rayed, but as the summer advances and cooler weather is experienced, the blossoms are absolutely rayless, and the plant is a good one for all purposes. It has a nice compact habit, yet possesses a freestyle of growth. This is the second season of its distribution, and there is little doubt it has come to stay.—D. B. C.

**Senecio pulcher.**—This handsome composite promises to do good service this year, a fact, however, mainly due to the replenishing of the stock. This is most readily done by means of root cuttings in winter, and when these break into growth to be treated as cuttings or tender seedlings for a while, eventually transferring them to their permanent positions. When this latter is done in the June of the preceding year good strong plants are formed that give excellent results when in blossom. A deeply-dug soil of good quality will grow this handsome plant to perfection. Where the best results are required frequent renewal of the plants is the simplest way.—E. J.

**Michauxia campanuloides.**—I saw this very interesting hardy plant growing and blooming well just recently on Messrs. Dobbie and Sons' seed farm, Orpington. Seed was sown last summer and the plants wintered well in the open. The foliage is elongated and of Acanthus-like nature. The flower-stems reach 6 feet in height, and carry a great profusion of white star-like flowers with narrow petals that slightly reflex. The seed-pods much resemble those of the Canterbury Bell. The second flowers come from the

axils of the first, just as do the blue flowers of the Chicory, but those of the *Micbauxia* are three times the size. Because so easily raised and so hardy the plants merit wide cultivation.—A. D.

**Chrysanthemum Flora.**—This old bright yellow pompon seems as much in demand as ever for market work, as well as for the embellishment of the hardy flower garden. In this neighbourhood the cottagers' front gardens are made quite bright and cheerful now that the summer flowers are on the decline, and in the parks and large gardens it is proving itself invaluable by the free display its pretty little blossoms make. The growth of this old sort rarely exceeds 2 feet in height, while its free growing character and dense, rich green foliage render the plant highly valuable for massing in large beds and borders. Unlike many others, this variety is a most continuously blooming one.—D. B. C.

**Chrysanthemum Mme. Marie Masse.**—For two or three weeks past the first blooms of this sort have been perfecting on the earliest batch of plants. In the hardy border, however, the plants are looking particularly well, and the colour of the later flowers, which are developing quite fast now, are very pretty indeed. The earliest blossoms were lilac-mauve in colour, but those from later buds are heavily suffused with bright magenta, this colour being very useful under artificial light. A free manner of growth, and without disbudding, suits this variety best, its fine branching habit ensuring a long-continued display. The flower belongs to the Japanese section and is a decided acquisition.—D. B. C.

**Clematis Davidiana.**—A singular-looking species with Hyacinth-like blossoms that alone are scarcely distinguishable from *C. heracleifolia*, though in foliage the two kinds are widely dissimilar. The flowers are quite unlike those of the ordinary forms, somewhat inclined to be tubular in shape with the tips heavily recurved; in colour a deep azure-blue. These flowers, though comparatively small, are produced in considerable numbers, and have a distinct effect when established in the garden. Both kinds herein named are of non-climbing type, and would probably give some interesting progeny if used in conjunction with some of the best flowering types, or even by crossing such as *C. erecta* or *C. integrifolia*.

**Mixed plants in a long, narrow border,** which skirts the greensward in one part of the gardens at Regent's Park, have been very interesting and pretty all through the spring and summer months. At the present time the *Zinnia* is well represented in many different shades of colour and in individual blossoms of good form and large size. *Celosia pyramidalis* is very showy and of great use now that the summer season is ending. By its free use a bright array of colour is ensured in blossoms of a kind rarely seen by the ordinary visitor anywhere else. *Phlox Drummondii* is also used, and *Begonia semperflorens*. Stocks, as well as other popular flowers, all seem to succeed remarkably well in this garden in the heart of London.—C. A. H.

**Cockscombs as bedding plants.**—An exceedingly pretty circular bed of handsome heads of the crimson Cockscomb is one of the best features in the bedding at Regent's Park just now. Each plant has a fine bold head of bloom, and these are pleasingly dotted all over the bed, with the free use of a pretty form of the *Artemisia* as a contrast. A few plants of the graceful *Acacia lophantha* give an elegant finish to a very pleasing association of plants. An edging of one of the Saxifrages, with its rich green carpet of growth, and devoid of blossoms, completes a unique bed. Another striking bed of Cockscombs was seen with yellow and crimson flowers, each toned down beautifully by the wise association of other plants.—C. A. H.

**Gypsophila paniculata.**—That is undoubtedly an interesting point that is raised by "R. D." in relation to the use of flowers of this plant with Carnations, &c., at exhibitions. Fern is employed as freely with cut flowers as Parsley

is with vegetable collections. But, of course, if *Gypsophila* be utilised as Fern is, why not other flowers? and if so, where is the practice to stop? All will admit that the introduction of the *Gypsophila* as commonly utilised is an exhibition gain. Why not then in schedules make its use as a decorative element with Carnations, or other cut flowers, permissive? Of course, its presence makes no difference to the quality of the Carnations, &c. Even Sweet Peas look all the prettier when set up in vases with *Gypsophila*.—D.

**Lilium longiflorum.**—The typical form of this Lily has flowered well this year in the open, and in the case of some freshly-planted bulbs has given every satisfaction, the long pure white fragrant trumpets on sturdy vigorous stems being handsome in the extreme. Fortunately, these escaped the very severe storms of hail that caused so much destruction in some parts, and which would have quite spoiled the Lily blooms had it touched them. When seen in all its purity this Lily is indeed difficult to surpass, and if planted in the open garden, it is a good plan to secure them in a measure by giving them a position near to shrubs of 5 feet high or thereabouts. In this way the Lilies receive a good deal of protection from driving storms that often do irreparable mischief.

**Tuberous-rooted Begonias** are used with good effect where other plants may be utilised to relieve their somewhat cumbersome appearance. A bed of rose, rose-pink and light salmon shades of colour is a very lovely combination, and with blossoms of these kinds the display in Regent's Park has been further enriched by the free use of the variegated *Chlorophytum*, just now showing its flower-spikes, and as a carpet to the bed there is the handsome foliage of *Lysimachia aurea*. Saxifrage as an edging forms a contrast to the richly-coloured foliage of the other plants, and gives a neat finish to the whole. Another bed of rich crimson tuberous-rooted Begonias, with a similar association of plants to that first mentioned, is a welcome change where variety is of importance.—C. A. H.

**Lilium tigrinum fl.-pl.**—Less beautiful perhaps than the purely single forms of this group, this variety certainly is quite distinct, and in the double flowers there is less confusion than in many flowers that possess abnormal quantities of petaloid segments. This variety, too, is fully as useful as the single kinds in the garden, and, for grouping among shrubs, all these Tiger Lilies have a value of their own by reason of their hardiness and easy culture. They may be increased to any extent almost, by the many axillary bulbils that are to be found on the stems of the plants. Sown in light sandy soil in boxes and left for a year, many will have attained to a good size, at which time, and when dormant, they may receive a more liberal treatment for another year, and then be planted permanently into their places in the garden.

**Azolla filiculoides.**—Wherever there are shallow pools of muddy or half stagnant water this exquisite little aquatic cryptogam is easily grown, and in such situations it spreads rapidly and even drives out, or crowds out, the native *Lemna minor*, a plant pretty well able to survive and take care of itself. The *Azolla*, after a shower or early in the morning, is covered with pearly globules of water or dew that glisten in the sun like so many diamonds. It is impossible to wet the upper surface of its tiny fronds, which soon right themselves if placed upside down on the surface of water. Early in the year it is suffused with a soft pale salmon-rose colour, but is now green in its fruiting stage. A supply is available to any gardener or botanist who would like fertile specimens on their sending stamped and addressed label.—F. W. BURIDGE, *College Botanic Gardens, Dublin*.

**Acæna microphylla.**—There is perhaps no more beautiful carpet plant in the rock garden at the present moment than this, though its pleasing effects are not seen at a glance. If closely re-

garded, however, the richly coloured heads of crimson spines that shield as it were the inconspicuous blossoms are very attractive, possessing indeed a beauty that is at once curious and rare. On warm, sunny rockwork the plant spreads quite freely into large creeping patches of deep cut pinnate leaves, and above these the new globular tufts of crimson spines appear quite freely in late summer and autumn. The whole plant is scarcely more than 2 inches high, and may be used as a carpet for spring flower bulbous plants, such as *Glory of the Snow*, *Snowdrop*, with good results, and in no wise detracting from its usefulness later on.—E. J.

**Carnations from Kelso.**—Messrs. Laing & Mather, of Kelso, have sent us a fine selection of Carnation blooms, which show how well the flowers do in the open air in Scotland. Among the varieties received were *Lady Nina Balfour*, *Mrs. Cochrane*, *Duchess of Fife*, *Kelso Abbey*, *Gift*, *Scarlet Seedling*, *Viscountess Melville*, *Dey*, *Dundas Scarlet*, and *Hayes' Scarlet*.

**Royal Horticultural Society.**—The fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, September 15th, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Pitcairnia" will be given by Mr. H. J. Veitch, F.R.S., at 3 o'clock.

**Gardeners' Royal Benevolent Institution.**—The committee, treasurer and trustees, acting on behalf of the members and subscribers of the above institution, with the concurrence of the president, the Duke of Westminster, recently awarded through the Home Secretary a loyal address to the Queen, for forty-six years the gracious patroness of the charity, congratulating Her Majesty on the completion of the sixtieth year of her beneficent reign; and a reply was received from the Home Secretary, stating that Her Majesty was pleased to receive the same graciously, and that with reference to the application for permission to make use of the words "Victorian Era" in connection with the title fund now being raised by the institution, he would inform them that Her Majesty approved of desired permission being granted.

**Holidays for gardeners (G. H. C.).**—Answer to inquiry re holidays for "A Working Gardener," we should consider that ten days would be fair. A deal would depend upon time worked and if all overtime is paid for. If overtime is paid for, a fortnight would not be too much holiday to allow.—H.

**The weather in West Herts.**—The temperatures during the past fortnight have been very uniform and rather cooler than is seasonable. On several occasions the rain has again fallen very heavily. August proved a wet summer month, especially the early part of it. Rain fell on seventeen days to the aggregate depth of 3½ inches, which is more than half an inch in excess of the August average. Of the amount nearly the whole was deposited during the last fortnight. Indeed, until the 20th, rain-water at all had passed through either petalation gauge, but since then 1½ inches has come through the heavy soil gauge, and nearly the same quantity through the light soil gauge. A record of sunshine was in excess of the average for August. There was, however, a marked contrast between the weather of the first and second half of the month, the former being very warm, clear and sunny, while during the latter half the temperature was only about seasonable, the rain heavy and persistent, and there was comparatively little sunshine.—E. M., *Berkhamsted*.

**Names of plants.**—*Anxious.*—*Dæmonorops* probably *D. palembanicus*; will keep in health some time in a cool conservatory, but needs more light to grow it successfully.—*D. Thomson.*—*Tacta mollissima*.

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## ORCHARD AND FRUIT GARDEN.

### PLUMS AS CORDONS.

A recent note contributed to these pages I mentioned the fact of cordon Plums being a useful form of tree for quickly clothing walls, and also for planting in odd corners and awkward positions where ordinary trained trees would be unserviceable. My object in referring to the subject is to give a list of the kinds which I have found to succeed best grown in this way, and at the same time to state the various aspects the trees occupy against the walls. The list will be found to comprise cooking and dessert kinds, and among the latter a few of the best Gage Plums are included. The trees are all grown against walls, the latter varying in aspect, some being due east, due west, and others north-west and due north. In all these aspects the trees succeed well, and produce plentiful crops of fruit in any but very severe seasons. They are all trained as single upright cordons, and the majority stand from 2 to 14 feet apart, the space between being occupied either by Plums, Cherries, or Peaches and Nectarines, according to the aspect of the wall, and they afford the latter a certain amount of shelter, inasmuch as they act as wind-breaks. The culture accorded them is simple enough, and consists merely in stopping young side growths to four leaves about the middle of June, and after this all shoots produced are regularly pinched—generally about twice, the last time at the end of August—with the result that the spurs bristle with fruit buds by the end of autumn, there being little or no winter pruning to do beyond shortening back any pieces of wood found to be of undue length. In the course of time the spurs protrude some distance from the wall, but unless they become unduly long this is rather an advantage, as they then bear larger crops of fruit, while the fact of their standing out a foot or 15 inches serves to form a fine break to the wind when the

latter is blowing from certain directions, to the benefit of the trees growing between them. However, when they grow too far away from the wall, a judicious spur-pruning soon puts matters right again, and the Plum being so accommodating in this respect, the stems can be clothed afresh with new spurs in the course of two seasons. It is sometimes found necessary to partially lift some kinds and lay the roots out afresh until the trees come into full bearing; after this it is unnecessary, unless any are found to be making rampant growth, as a result of failing to carry crops of fruit, such as is the case with a few this season. Young cordon trees will reach the top of the wall in from two to three seasons, generally the second, and invariably commence bearing the second year from planting. I prefer maidens for this purpose, planted as early as the trees can be sent out from the nursery, and cut down to within 1 foot of the ground about midwinter. A barrow-load of fresh soil is placed about the roots to give them a start, and, as a rule, they break away strongly, and the stems by autumn are generally well clothed with prominent fruit buds. The following spring the stems are shortened back somewhat according to their strength, and unless anything should go wrong with them, they break again and reach to the top of the wall, and require to be stopped before autumn arrives. The next year the wood buds on the stem will break freely, and by the end of the third season the trees become clothed throughout their entire length with spurs, and will then be firmly established. Should no fruit buds be formed by the end of the second year, the trees should then be lifted, partly or wholly so, according to the condition of the wood, and this will give the necessary check to induce fruitfulness. If a too rich soil should be the cause of failure, a little lime rubble mixed with it acts as a capital corrective.

### VARIETIES.

The first variety to head the list is Rivers' Early Prolific, which is so well known that a

further description is unnecessary. This succeeds admirably as a cordon, and I have it on all the aspects mentioned, with the result that the fruits may be had as late as the second week in September. The wood produced by this kind is of a most fruitful character, and it is but seldom that winter pruning of any description is required. The next is The Czar, and this is almost equal to Prolific in productiveness. This I have on an eastern aspect, where it does exceedingly well, and the fruit keeps in good condition until the end of August. Cox's Emperor on the same and a north-east aspect crops well, and bears fine handsome fruits. This is rather a strong grower until it commences to bear, but a check at the roots soon remedies this, and afterwards it behaves satisfactorily. Autumn Compôte and Belle de Septembre, two excellent Plums somewhat similar in appearance, bear heavy crops grown as cordons, and if protected the fruits last in good condition for a long time, or until Coe's Late Red is ready for use. The last as a cordon is a marvel of fertility, and should always be included when forming a collection on account of being so productive and valuable as a late cooking kind. This and the two foregoing I have on an east wall, the trees being about twenty years old. Angelina Burdett on a western and also on an eastern aspect is a great success, as it bears regular crops of its medium-sized, but richly-flavoured fruits, which are alike useful either for cooking or dessert. As is well known, this Plum has very distinct foliage, and it makes but medium growth, but is very fertile. Reine Claude Violette is a good companion to the last, and is a delicious Plum for the dessert. This I have growing on the same aspects as the last mentioned, and if not quite such a heavy cropper as that variety, it is very certain and seldom misses. The fruits of both Angelina Burdett and Reine Claude Violette will hang a long time, but must be protected from flies and wasps, which will otherwise soon make short work of them, so deliciously flavoured are they.

Webster's Gage is a good cropper and comes into use about the middle of September on a west wall. Unlike the last mentioned, this is a golden-yellow Gage; it attains a much larger size than Webster's, while in point of flavour they are about equal. The tree is rather a strong grower and perhaps not quite so prolific as some, but it is, nevertheless, deserving of culture as a cordon, as its handsome golden fruits when properly ripened amply compensate for all deficiencies. Guthrie's Late Green is somewhat similar in appearance to Webster's Gage, with the exception of the colour, which is a greenish-yellow. It is, however, a deliciously flavoured Plum and a good cropper, and coming into use, as it does, towards the end of September, it is then invaluable either for cooking or eating. The next is the old Green Gage, which invariably bears well on an eastern aspect, the individual fruits being finer than those gathered from either fan-trained or standard trees. This sort is the worst of the whole lot for growing away from the wall, and, no matter how closely the wood may be pinched, the older wood has a habit of thrusting itself, as it were, out from the stem year by year until it forms an obstruction when passing up and down the alley. One good thing, spur-pruning soon rectifies this matter, and if part is pruned away one season and the remainder the next, there is then only a partial loss of crop. In spite of this objection, if it can be termed an objection, several trees of this kind should be included by anyone feeling tempted or disposed to adopt this system of growing Plums on account of its intrinsic value both as a cooking and dessert variety. After all said and done, no variety of Plum that we possess can surpass the old Green Gage for flavour, and no apology is therefore needed in recommending it to be grown in quantity. The last on my list is Coe's Golden Drop. This I have both on eastern and western aspects. It is a grand Plum for general purposes, and is a constant and heavy cropper, and several trees should be grown if a long supply is needed. It is a sort that will hang well until the first and second weeks of November if pains are taken to protect the fruits from insects, and when shrivelled the fruit is delicious. The trees are moderate growers, and always set a profusion of bloom-buds once they commence to bear, and if kept clean and the roots fed when the trees are heavily cropped, they will continue in a fruitful condition for many years. Victoria I have grown in this way, but it is not satisfactory, and I intend removing the trees this autumn. I have some of the newer varieties planted on a northern aspect, and, according to appearance, many will fruit another season, but until this takes place I am not in a position to give an opinion either of their merits or demerits.

No doubt there are other varieties which are eminently suitable for growing in cordon form, but those named I have found to succeed here, and if from three to six trees of each kind were planted they would furnish a long succession of fruits, particularly if the aspects could be varied. Even if this could not be done and the trees were all planted against a wall having, for instance, an eastern aspect, the supply would last a long time, and as they may be as near together as 18 inches they will not take up a great deal of room, and this where wall space is limited is a consideration. A. W.

Stoke Edith, Hereford.

**The Mirabelle Plum not the Cherry Plum.**—A much needed correction is made by "A. F. B." in the *Gardeners' Chronicle* last week. Those who

describe the Mirabelle [and the Myrobalan as one and the same thing are in error, and this we see done in the lists of good houses. "A. F. B." says: "Some confusion seems to exist as to what is meant when the Mirabelle or the Myrobalan is named, the lecturer seeming to consider them one and the same, whereas they are as distinct as two Plums can well be. The former—the Mirabelle—is a small, round, early yellow Plum. It is not much grown in this country; why, I do not know. In France it is much esteemed. As a stock for the Plum this Mirabelle is, in fact, not used, and does not appear suitable."

**Nectarine Early Rivers.**—I saw the other day at Coldham Hall, Bury St. Edmunds, a grand young tree of the above-named Nectarine carrying several dozen ripe fruits. That it is an advance on Lord Napier in point of earliness is undoubted, and the fruits are very fine in size, colour and quality: but what struck me most of all was the splendid growth the tree was making in spite of its heavy crop. In this respect it also is well ahead of Lord Napier, which is only a moderate, not to say puny, grower at the best, and seldom lives long, though it has the knack of finishing up a heavy crop of grand fruit on very meagre growth, and always performs better than it promises. If the constitution of Early Rivers is anything like as good as it promises to be at Coldham, it is indeed an acquisition.—J. C. T.

**Apricots and Nectarines.**—At this season Apricots need copious supplies of moisture at the roots, and though there has been some rain, I find it has failed to reach the roots, especially where the borders are cropped. Much mischief is caused by dryness at this season. The trees in many cases bore a thin crop and are making a free growth, needing ample supplies of moisture. I find the more robust the trees the less danger there is of branches dying. Should this occur, it will be less felt if there is some good wood made to fill in the blank spaces. Few fruits love moisture at certain seasons more than Apricots, and by giving free supplies the wood is better able to stand our variable spring weather, which tries the trees so much. The Apricot does best when its roots are near the surface, hence the need of moisture in dry seasons. A mulch at this season is of great value in such soils, as it retains the moisture given and promotes root-action. I do not advise a thick mulch.—S. H.

#### THE EVILS OF GRAFTING AS REGARDS THE APRICOT.

THE *Gardeners' Chronicle*, which has hitherto made somewhat light of our efforts to call the attention of the public who suffer by it to the dire results of grafting, now itself begins to get some evidence together about the evil:—

In its native country and in Central Asia the natives propagate the Apricot by seed. True reproduction of a variety is, however, only obtained by means of the graft, and to this end, in more northern latitudes and in Central Europe, in ground with a good subsoil, the stock generally adopted is that of certain varieties of the Plum tree, such as Myrobalan, St. Julien or Damascus.

At the pomological congress which, not long ago, was held at St. Petersburg, M. Simireuko drew attention to the value of the wild Apricot for grafting cultivated varieties of the Apricot itself, as well as those of the Plum and Peach trees. He gave it as his opinion, based on the results of many years' experience, that the wild Apricot is the most valuable stock.

The President of the French Pomological Society, who has recently referred to this subject in the *Pomologie Française*, states that the average duration of Apricots grafted on the Plum in the Ain department, for instance, does not exceed four years. Nor does the cause appear to have been hitherto explained. The Apricot, almost invariably grafted on the Plum in France, grows at first very vigorously, the scion dies, though the subject (stock) continues to thrive.

If anyone who reads the above extracts has ever looked at the gumming and dying Apricot trees growing under the most favourable conditions in English and Irish gardens, he may begin

to see cause for the misery, without looking any further for all or other vain subtleties which have characterised seed writings devoted to the cure of a trouble which has now gone on for generations. It almost entirely deprives us of the fruit of a good fruit.

What is to be done? First, for the fair understanding of the question, we have to consider what is done now. The nurseryman has a stock of one of the wild Plums noted for vigour and belonging to the same genus of plum as the Apricot, so that the alliance is close enough to allow the stock or base of the future tree to push up a vigorous growth for the first year or two, or the time when the tree is in the nursery. The unnatural alliance goes on very well until the tree is of a saleable size and happily disposed into some good garden, but the vigour of the stock does not go very much further, except trying to escape from its burden, and it is very long before the Plum begins to creep up and injure the Apricot upon it. By pulling away suckers continually—which is part of the unfortunate gardener's duty—we may escape some of the evils of the forced union for a time, but we come on the gumming, and loss and death in other ways, and the poor state of health of the tree. Now it might be remedied, we think several ways, or at least a trial made to solve the question. If M. Simireuko is right, we take the wild Apricot, but why not also, following the example of the people in the native country of the Apricot, *i.e.*, sow some seeds of the finest fruit we can get and raise it naturally? We might get a poor variety, but also we might get a precious sort. As these things vary indefinitely, we might get quite distinct varieties of seed, and perhaps find—at least in warm soil on the sheltered warm walls that abound in British gardens—healthy and fruitful trees. By adopting the cordon system of training, the seedlings could be planted rather close, so that the poor ones could be weeded out and the seedling varieties take their place. Lastly, we are layers and cuttings, as we cannot say that this tree is less amenable to the propagation than many other trees of its family.—*The F*

**Pear Marie Louise d'Uccle.**—This, though not equal to its parent, Marie Louise, in point of flavour and general excellence, surpasses it in vigour of constitution and productive power, and being, as it is, a pretty certain cropper, a capital kind to grow for market. For production it is much valued in many places, particularly where Marie Louise itself is but indifferent success, and the fruits when thoroughly well ripened are certainly not to be despised. In cold soils the flesh is coarse grained and is half melting at the best, but on a warm, rich soil it becomes buttery and melting and the flavour fairly good. Cultivated in pyramidal form on a Pear stock, it will form a handsome specimen in a short time and prove very prolific. When grown as a bush or cordon on the Quince stock, it is equally as satisfactory and never fails to produce heavy crops of very fine fruit. I would recommend its being grown in private gardens where Marie Louise succeeds well, as it can be used for stewing, a purpose for which it is eminently suited.—A. W.

I was lately somewhat amused when visiting round a small garden at being shown a well-loaded Pear tree on a south wall which the gardener called Improved Marie Louise. The variety was Marie Louise d'Uccle, which, so far as being an improvement on the old variety is not to be compared with it. It is true that when once established the tree is a good cropper, a fact making it so popular amongst market growers, but as to flavour the less said the better. I think it keeps longer sound, but in nine cases out of ten it eats gritty and has very little juice. It is a good Pear for stewing or for growing in cold localities where the better class of varieties seldom succeeds; but certainly the title of "Improved" is quite out of place, as all who know well

good Pear is and have tasted the two sorts will testify.—C. C. II.

**Grafting old trees.**—Whatever may be the benefits resulting from the grafting of old trees, notably Apples and Pears, with diverse varieties, my experience has always been that it is better to do such grafting by using strong grafts on large stems than to employ small grafts on many stems. However, not everyone coincides. I saw the other day in an old orchard at Ruxley Lodge, near Hereford, admirable examples of the plan I favour. Some Pear trees that were several years ago beheaded and regrafted, and now have splendid raminal heads of the best possible character. The gardener, Mr. Miller, having formerly resided in Worcestershire, where grafting old trees is a common practice, and where, as he said, even the large shoemakers are in the slack season expert grafters, saw such admirable results from the practice, that having a number of large trees at Ruxley Lodge that required the operation performed on them, had one of the Worcestershire operators up to carry out the work. The present robust heads show how well it was done. The trees were cut back to three or four large branch stems, into which were inserted in each case two or three large grafts fixed in wedge position and driven hard home. Mr. Miller mentioned that he once saw an operator who, having given a stout graft of this nature home, before hanging the whole weight of his body on to it, showed how firmly it was fixed to the tree. It is such grafting as this which eventually produces not only stout growths, but results in far earlier fruiting than is the case when many grafts of varying wood are put on to small numerous branches. Not only is the result better, but such grafting is more quickly done. As to beheading the old trees, that may be partially done early in the winter, such as during frosty weather if desirable, but at the time of grafting a fresh cut should be made to the point at which the scions are inserted.—A. D.

## ROSE GARDEN.

### HYBRID PERPETUAL AND HYBRID TEA ROSES.

I THINK that simplicity of classification ought in all cases to be aimed at with regard to cultivated flowers, and hence I have always protested against the recent "fad" of making a separate class for what are called Hybrid Teas. I was certain it would lead to confusion, and, at more, moreover, there was no necessity for it, as all the Roses so called might very well be regarded as Hybrid Perpetuals, and that the additional Roses added to this class might as well once have been put into that class. I think we all know that the so-called Hybrid Perpetuals are of a very mixed origin, some showing more affinity to Bourbons and Damask roses, others more inclining to Teas and Chinas, but all of a very mongrel character. The committee of the National Rose Society ought otherwise, and ventured upon forming a distinct and separate class and issuing a list of those Roses which were to be regarded as belonging to it. The idea seemed to please the French Rose growers (I think simply from a commercial point of view); they have poured in upon us of late years such a quantity of useless Roses of the H.P. class, that, seeing signs of the popularity of the new class on this side of the Channel, they announced from time to time several additions to it, but their first step was a very curious one. La France and the sports from it, Augustine Guinoisseau and Danark, and Capt. Christy were transferred from the H.P.'s—amongst which they had been always classed—to the new class of Hybrid Teas, while on this side Lady Mary Fitzwilliam

and Viscountess Folkestone were similarly treated, and were no longer to be regarded as H.P.'s. Another notable example was Kaiserin Augusta Victoria, a very beautiful Rose of Hungarian origin, but in no way—according to the opinion of some experienced growers of Teas—distinguishable from a pure Tea; and this last season we have seen it carrying off the medal for the best H.P. or H.T., thus excluding many of those which we have hitherto regarded as deserving of an award in this class. What are we to say of Gloire Lyonnaise? Guillot sent it out as a yellow Hybrid Perpetual, which, of course, it never was, for the faintest suspicion of primrose colour at the bottom of the petals did not warrant it being so called; but now we are told to regard it as a Hybrid Tea, and that the raiser was all wrong in calling it a H.P. Assuredly some of the Roses which have been of late put into the class, such as Clara Watson, Mrs. W. J. Grant and Caroline Testout, might very readily have taken their place among H.P.'s instead of, as at present, Hybrid Teas. One is continually asked by correspondents, even so far off as Cairo, how to define a Hybrid Tea and distinguish it from a H.P., and one's answer must always be that there is no way in which a satisfactory reply to these questions could be given. Thus, while agreeing with a paper which appeared in THE GARDEN, August 21, in many of its statements I see the same confusion upon this subject; thus all through La France and Viscountess Folkestone are regarded as H.P.'s, but if the writer were to compete for a prize offered for Hybrid Perpetuals he would find himself disqualified if either of these were found in the exhibit.

I entirely agree in the strictures passed upon scentless Roses. I do not think that we ought to have any of them, even although it would lead us to discard such as Baroness Rothschild. We have now so many Roses of all colours which are perfumed, that I do not think any encouragement ought to be given to a new Rose which lacks this essential. Unquestionably the dark Roses seem to have the true Rose scent more distinctly than the lighter varieties. There are some people who do not care for the scent of the Tea Roses. I do not go so far as this, but I unquestionably prefer the scent of such Roses as Charles Lefebvre, Prince Camille de Rohan, Earl of Dufferin, Jean Souppert, and Horace Vernet, as they have the true attar of rose perfume. There is one sentence in the article in question which completely puzzles me: "Almost without exception the dark red Hybrid Perpetual Roses are sweet scented, the want thereof being principally confined to some of the pink varieties, as Merveille de Lyon, Susanne Marie Rodocanachi, and Duke of Edinburgh," for Merveille de Lyon is a white and not a pink Rose, and generally takes the prize as a white Rose in the classes arranged for flowers of that colour, while Duke of Edinburgh is a most brilliant scarlet-crimson and is so described in the Rose Society's catalogue, and is very sweet-scented. Merveille de Lyon is not so, and is generally supposed to be a sport of Baroness Rothschild. It is somewhat curious that so few Roses of recent years either in England or France belong to this highly coloured section of the H.P.'s. Sir Rowland Hill, sent out nearly ten years ago, is a sport from Charles Lefebvre. Captain Haywood, the last Rose raised by the late Mr. H. Bennett, is very brilliant in colour and unsurpassed as a dark Rose for forcing, and in the supplement of the National Rose Society Captain Haywood is the only dark Rose mentioned. The Duke of Fife is certainly a dark sport from

Etienne Levet, and Duc d'Orleans is said to be a brighter Marie Baumann, but neither of them has the colour we especially now want. Two of the very best dark red Roses, Reynolds-Hole, raised by Paul and Son, and Louis van Houtte, one of Lacharme's, raised some twenty-eight years ago, have, unfortunately, not very good constitutions and do not answer as cut-backs. There is therefore plenty of room for hybridists to see if they cannot give us something more decided in colour and at the same time sweet scented. Probably, by going back to the old Gloire des Rosomanes, which is only semi-double, we might, after two or three generations of careful cross-fertilisation, obtain what we want. In these matters, however, I write entirely as an outsider. I have never hybridised and never raised seedlings, and therefore my suggestion may be worth nothing; but at any rate it is worth trying, and I hope some of our more experienced hybridisers may attempt it. DELTA.

## NOTES OF THE WEEK.

**Phlox Regulus** is a very showy and beautiful variety of the herbaceous Phlox, the flower large and of a bright rose-crisse shade, that is very effective in a mass. The habit also is good.

**Caiphora aurantiaca** is a very charming annual of climbing habit, and bears a profusion of rich orange-coloured blossoms that are very striking. In many positions where there is no room for the more rampant growing climbers this plant should be found of service.

**Andromeda arborea** is a very distinct species, with large terminal heads of creamy white blossoms that are produced in great numbers. The foliage is quite distinct from that of the other species and much larger and broader. Flowering too at this season, it should be useful in the garden.

**Chelone Ottigna.**—This at first sight bears some resemblance to *C. obliqua* vars. The flowers are, however, richer in colour and the habit much more refined. The flowers are of a warm rose-purple hue and very attractive. Mr. Ware had some bunches of it at the Drill Hall this week.

**Hibiscus totus albus.**—The pure snow-white blossoms of this plant are very chaste, and seen in the mass are effective in the extreme. At the Drill Hall this week Messrs. Veitch had some compact, well-flowered examples that could not fail to attract attention. Small plants, not more than 2 feet high, were laden with flowers.

**Lilium Batemani.**—For the late summer this has no equal in the open ground, where with a little care it may be easily cultivated if planted in a deep bed of loam and peat. Even at this late date there are a few blossoms, as was exemplified at the Drill Hall this week, when Messrs. Barr exhibited flowers in their mixed group of hardy plants.

**Hibiscus Manihot** is a yellow-flowered form which gained an award of merit at the Royal Horticultural show this week, though to our thinking inferior to the variety called Mrs. Macintosh, which only gained a vote of thanks on the 24th ult. Both are yellow-flowered, the latter having the larger blossoms and also a well coloured base.

**Kniphofia Leichtlini distachya** is one of the most curious and beautiful of the large family of perennials. Individually the blossoms are of an orange tone, and much shorter than in the majority of the varieties of this group; so much so, that the stamens which protrude very considerably predominate by their exceeding brilliancy, and provide a most distinct result.

**Acidanthera bicolor.**—Cut spikes of this very distinct plant were shown by the Messrs.

Veitch on Tuesday at the Drill Hall, and attracted attention by reason of the distinct form of the flower and its quaint colouring at the base. This latter is a sort of violet-purple shade, not wholly uniform, but embracing different hues of heavy and light shades of the same colour.

**Cornus florida.**—In your issue of last Saturday (p. 177) you ask if *Cornus florida* is known to flower well in England. I have two plants here which flower more or less every year, and some years very plentifully, and they are then a very pretty sight.—B. E. C. CHAMBERS, *Grayswood Hill, Haslemere.*

**Chrysanthemum Barbara Forbes** and *C. Queen of the Earlies* are both pure white kinds of distinct form. Flowers of each came before the floral committee of the Royal Horticultural Society without receiving any award. Both are Japanese in form, the former with incurving petals, and the latter, which is somewhat flat in form, incurving slightly at the tips; the flowers are of medium size.

**Rosa rugosa.**—Though we have scarcely realised that this handsome plant has finished its flowering for the year, we are reminded of the near approach of autumn by the masses of richly coloured berries the plants produce. These in their way are also effective, and give the plant a value of its own during the early autumn months. The handsome foliage of this species is also an attraction both before and after flowering.

**Helianthus Queen Victoria.**—This rather distinct form, exhibited by Mr. T. S. Ware at the Royal Horticultural show on Tuesday, is said to be a sport from *H. multiflorus* var. It differs from the *H. multiflorus* pl. in the almost tubular form of the central tuft of florets, in the same way as may be noted in the Anemone-flowered *Chrysanthemum*. The outer or guard petals are the same as in the old form, while the tubular florets impart a certain neatness and compactness to the flower.

**Aster Mrs. W. Peters** is a seedling variety of the Michaelmas Daisy with small white flowers. Though rather pretty in the case of the pot plants as shown, the two-year-old plant from the open ground possessed no merit whatever to entitle it to an award of merit. Indeed, it is not too much to say that the Drill Hall could easily be half filled with seedlings possessing as much merit as this one. If we remember aright, much better varieties were passed over by the conference committee a year or two ago.

**Eucomis punctata.**—Judging by several well-flowered examples at the Drill Hall this week, this distinct plant is receiving attention for pot culture, for which purpose it is well suited. This species is perhaps the largest of the genus and the leaves reach quite 3 feet in length when well grown. The flower-spike, rising from the bulb to fully 2 feet high, is for some half its length densely clothed with wax-like starchy blossoms of a creamy white and freely spotted with rose. The blooms are also sweet-scented.

**Verbena venosa.**—Since the recent abundant rainfall this old garden plant appears to have assumed a fresh vigour that has also given effect to the fine mass of flowers so characteristic of the plant. As though approving of the lessened sunlight and sun-heat, the flowers are of much deeper hue and the stems more elongated than was the case during the great summer heat of this season. For these reasons it is now a most welcome mass of colour, and being of good habit and very profuse flowering it is a valuable autumn plant.

**Senecio pulcher.**—While some plants deteriorate with constant rain, particularly when accompanied with wind and cold, others again improve, and this is so of this *Senecio*. During the great heat of the present year the young plants put out in spring made little progress, but as noted recently in the collection at Long Ditton they have improved considerably. Some of the best formed flowers of the plant we have seen were in Messrs. Barr's group at the Royal

Horticultural show this week, each bloom being nearly 4 inches across.

**Erodium macradenium.**—This pretty flowering plant appears to be hardly ever without many of its blossoms expanded when the tufts are large and well grown. In the herbaceous borders at Kew a very handsome tuft spreads out over nearly 18 inches, and the very pleasing foliage and dainty blossoms combine to make it both a choice border plant as well as a most desirable and beautiful object for the rock garden. The plant may be easily raised from seeds, that should be gathered at intervals throughout the year, in consequence of the profuse flowering of the species.

**Bougainvillea glabra.**—Among the more uncommon plants that are employed for furnishing the flower beds in Hyde Park are several specimens of this *Bougainvillea*, which, being thickly studded with their bright-coloured bracts, are not only very showy, but quite distinct from any of their associates. Many beautiful subjects are to be seen along Park Lane in the shape of large plants all flowering freely. Beside the *Heliotropes* and *Fuchsias*, which are always a special feature, may be particularly mentioned, beside this *Bougainvillea*, *Plumbago capensis*, *Streptosolen* or *Browallia Jamesoni*, and *Erythrina Crista-galli*.

**A pretty combination.**—A pleasing effect is sometimes accidentally produced from very simple materials, as in the case of a plant of the wild Teasel (*Dipsacus sylvestris*) here, about 5 feet high, round the base of which some shoots of the wild *Convolvulus* (*C. sepium*) sprang up, and have now clothed the lower half of the stem with a conical mass of dense foliage, the combination suggesting the idea of a huge candelabrum with a richly embossed base. This chance arrangement of two simple wild plants is quite as effective and pretty as many things which I have seen that required some thought and taste in designing them.—W. M., *Wexford.*

**Lilium speciosum Krætzleri.**—This very handsome pure white Lily is without doubt one of the best things among the hardy plants now in flower. Indeed, all the forms of the *speciosum* group are valuable because of the season of their flowering, while their perfect hardiness and free growing characteristics render them invaluable. A single bulb when well planted will make a fine specimen in a year or two, and where three or six can be grouped so much the better for immediate effect. Against the frequently over-abundant sombre hue of many shrubs in the borders the warm rose or crimson shades of these Lilies appear with surprising results; so much so that it is a wonder they are not more often seen.

**Colchicums.**—The Meadow Saffrons have again come into flower with almost wondrous rapidity. The first to come into bloom was *Colchicum Bertoloni*, which has now many companions. Among these the pleasing *C. byzantinum* is a general favourite, although cast in the shade in some respects by the more massive flowers of *C. Bornmulleri*, *C. speciosum*, *C. speciosum rubrum* or the fine chequered blooms of *C. Sibthorpi*. The common *C. autumnale* and some of the less plentiful Meadow Saffrons look magnificent in size beside them. None of the double varieties had opened in the first week of September, and the constant rains have deprived the single forms of much of their usual brightness.—S. ARNOTT, *Carsethorn, N. B.*

**Anemone japonica Brilliant.**—At Winchmore Hill Mr. Perry has a variety of this well-known plant bearing the above distinctive title. The coloured forms of this fine autumn flower are open to much improvement, and the name above given is certainly suggestive of improved coloration. An acquaintance with the growing plant, however, in such a case is the only real way of deciding as to its merits or otherwise. Many years ago a red form that was distinct from the type bore the varietal name of *A. j. rubra*, but whether it remained constant we are not aware. Different soils and localities are at times respon-

sible for certain colour changes in garden flowers these latter often reverting to their original state at no distant period.

**Campanula nobilis.**—This is an excellent plant for a cool spot even where a rather heavy soil obtains, as by its vigorous nature the species is at home, both growing and flowering freely. The flowers, too, which are of a reddish-lilac hue in the type, are both large and handsome, a very striking when seen in a cool and moist spot. In such a place the plant spreads quite freely means of underground stems, though it may not be accepted as being of a weedy or even troublesome nature. Indeed, in these respects the plant is readily kept in hand, as is also the creamy-white form known as *C. nobilis alba*. The plant will grow from 18 inches to 2 feet high, the large drooping blossoms each upwards of 3 inches long. It is a native of China and a good border plant when once it becomes established.

**Campanula barbata.**—This very beautiful species is certainly not largely grown, and it only occasionally met with even in some botanical gardens. Its scarcity in collections of hardy plants may be due to the fact of its not being a good perennial and frequently perishing after flowering. For these reasons it is best to register it rather in the light of a biennial, and as seeds are produced somewhat freely, it is quite easy to raise sufficient plants to form a very pretty collection in the rock garden, which is the best place for the plant. Grown in a deep and rather sandy loam the plants will reach 1 foot high or rather more. The pale blue of its drooping corolla is of a very charming shade, the plant being of a neat and attractive habit withal. The white variety is especially beautiful, and worthy of the best position that can be given it, viz., a warm and sunny aspect. A very pretty group may be formed the two in mixture in the rock garden, where will at least equal the best of its genus.

**Lilium speciosum album novum.**—Among several good forms of this beautiful section of autumn Lilies the above holds a prominent position, the reason being not far to seek. Pure and spotless in the chasteness of its fair white flower that are even of greater substance of petal than is usual in the other white kinds, the blooms present an almost massive appearance, while the orange-yellow anthers at once distinguish them from other white kinds. In other minor details it is also quite distinct, and flowering a day or two in advance renders it useful on this account. When grown in a deep bed (say at least 3 feet) loam and rough peat, with a little manure added and plenty of sand, this lovely Lily, the second or third year, will reach 8 feet in height. To achieve this, however, the beds should be slightly sunken at the surface and the position a partially shady one. In the growing season and until the flower buds are fully grown the plants should not lack moisture. Thus grown this is one of the grandest of the hardy Lilies during September, and as such should be in every garden.

**Crococsmia imperialis.**—This is undoubtedly one of the finest hardy plants extant, and therefore we can only hope for the time when such a really handsome autumn-flowering plant shall become plentiful in our gardens. At present, however, it is anything but common, though we are reminded of its value by meeting it in flower lately. The really handsome flowers are often 4 inches across—some, indeed, we have seen must be even larger than this—while the clear orange-scarlet of the flowers, produced on stems about 4 feet high, give a very striking effect in the garden. It is a plant to take care of and increase freely both by seeds when these are procurable, or by division, which is more easily accomplished after flowering is complete. Though regarded as a perfectly hardy perennial, care should be taken to secure it from severe frost, firstly, by planting in position naturally sheltered and having perfect drainage; and secondly, either by deep planting or subsequent mulching overhead. It is altogether too valuable a plant to be risked without some winter protection.

STOVE AND GREENHOUSE.

FOURCROYA BEDINGHAUSI.

The Fourcroyas or Furecroas belong to the same tribe, to which both in leafage and flower-spike they bear a marked resemblance. They are mostly natives of Mexico and Tropical America, and are thus generally unfitted to withstand the climatic conditions inseparable from open-air culture in England. In the Isles of Scilly, however, *Fourcroya longeva* flourishes to perfection in the genial atmosphere that pervades those favoured shores, encompassed by the warm tides of the Gulf stream, and in the gardens of Tresco Abbey it may be seen in quantity, rearing its tall bloom-spike in some cases to a height of 25 feet. *Fourcroya Bedinghausi*, at one time confounded with *F. Roezli*, is said under favourable circumstances to attain and even exceed this stature. When in flower this *Fourcroya* is far more ornamental than *F. longeva*, its inflorescence being pendulous and forming almost a curtain around the central flower-stem. S. W. F.

ACHIMENES.

It is gratifying to find these old-fashioned showy greenhouse flowers gaining favour again. Years ago I used to like to inspect the fine specimen pans of Achimenes which found their way to the South Kensington exhibition, these being from 2 feet to 3 feet across. Two collections that recently came under my notice had been well grown. One of them was in pots, the other in hanging baskets. They do best in rather shallow receptacles, or if grown in ordinary flower-pots the drainage should reach nearly half way up, as they only like as rich soil as they can permeate with roots during the limited season of growth. Although fairly easily managed when once established and growing freely, Achimenes are sometimes difficult to coax into active growth, unless a fairly warm moist atmosphere is given them. Indeed, although classed generally as greenhouse plants, I always find them to enjoy an intermediate house. They are often spoilt when quite in a young state by allowing the morning sun to strike on them when in a wet state from the syringe. When the plants get older and the foliage more hardened they stand it better. Afraid of scorching, growers sometimes give too heavy shade or keep the pots too far from the roof glass, hence a lanky, weakly growth and ill-furnished pots or pans with little bloom in the end. A compost of light fibrous loam, rubbed down by hand in preference to being sifted, with the addition of a small part leaf-mould and sufficient sand of a coarse nature to keep the whole porous, will grow Achimenes well. Care is necessary at the outset in watering, as any excess in this matter is injurious to a fair quantity of roots being made so that the young plants yellow and stop growth. When about 3 inches high the tips may be pinched out to induce side breaks and a stocky foundation. As soon as the blooms are freely produced syringing must be abandoned and atmospheric moisture supplied by frequent damping down. Harry Williams, Dazzle, Longiflora mor. Doctor Andry, Ambroise Verschaffelt, Ave Queen, and Sir Treherne Thomas are all excellent varieties. J. C.

summer, when growing freely, these *Celosias* are liberal feeders, particularly if confined in pots, but in autumn and winter care must be taken not to overwater them, as, being of a somewhat succulent nature, an excess of moisture will often cause them to decay. This *Celosia* is by no means a new plant, having been introduced from India in 1820, but it is only within the last few years that it has been grown to the extent that it is at the present time. By continued selection we have now several well-marked forms, which in a general way can be depended upon to come pretty true from seed. An ally of this *Celosia*—viz., the Cockscomb—may also be seen bedded out occa-



*Fourcroya Bedinghausi*. From a photograph sent by Mr. W. Sangwin, Trelissick.

mistake often made in its culture is growing it too well, or rather too strongly, rich soil causing grossness of foliage. To get nice shapely little plants, cuttings of half-ripened wood should be struck under bell-glasses in firm sandy soil, potted on and grown rather pinched for pot room in a light, warm house. For compost use a third of good loam, one-third of peat, the remainder made up of broken bricks, charcoal, or some similar material, and a good sprinkling of sharp silver sand. In the earlier stages care is necessary to prevent the plant damping, especially if the cuttings were placed rather deeply in the first place. Afterwards a free supply of water is advisable, and when the pots are quite full of roots a little weak soot water is helpful. The plants may be cut down and will break freely in spring, or, if late ones are required for grouping, they may be taken up in single stems and hardened a little before being taken to the house or conservatory. *P. pallidifolius* is also known as *Reidia glaucescens* and is a native of Java.

STREPTOCARPI.

THE recent illustration of these useful flowering plants, together with the cultural remarks by Mr. Tallack, would, I am sure, be welcome to readers of THE GARDEN. Some gardeners succeed well with them, while others find a difficulty in growing them well, their soil not seeming to suit them. I am glad Mr. Tallack gets the paler and more delicately coloured varieties to grow vigorously and flower satisfactorily, as I must confess that the latter with me have up to the present made indifferent headway. The older, darker strains seem to possess a far more vigorous constitution and soon grow into large plants. I have some in 8-inch pots that in one season have borne 100 spikes of bloom, while the foliage is very long and of a dark glossy hue. The paler varieties start well enough when repotted and subjected to a gentle warmth, but gradually lose their vigour when placed in a greenhouse temperature. Several of my neighbours have experienced the same difficulty. I think the paler coloured, less vigorous varieties require to be potted in a lighter compost, of which leaf-mould forms a good part, the pots to be no larger than is absolutely necessary, and to be thoroughly well drained. Some gardeners have condemned the use of any heat whatever for *Streptocarpus*, but my experience is that an intermediate temperature, charged with a fair amount of atmospheric moisture, suits them well, a slight shading being given, and if those who do not succeed with them in a cool greenhouse were to give this treatment, better results would follow. During the winter months the foliage takes on a rusty appearance, and care is needed not to give too much root moisture, or the plants are apt to die right out; in fact, no more should be given than will keep the foliage from flagging. C. H.

HERBACEOUS CALCEOLARIAS.

THE earliest sown batches of these will now be ready for transferring to 6-inch pots, but before doing so it will be advisable to subject them to another gentle fumigation, as when newly potted they do not care for the ordeal. Some growers condemn the use of tobacco fumes for *Calceolarias*, but I have always found that mild doses administered say once a fortnight or three weeks will keep the plants quite clean and not injure the foliage in the least. It is when the pest is allowed to get a strong hold and heavy fumigations are given that injury follows. A north aspect is the most suitable for the plants at present, but to leave the lights entirely off the frames and the plants quite exposed, as some do, is only to court failure. They should be tilted sideways, so that a free current of air can pass over and around each plant. If the pots were well drained and the plants vigorous, the roots will, when working freely in the new soil, take water freely, but anything approaching excess must be guarded against, or

sionally, generally with satisfactory results.—H. P.

**Phyllanthus pallidifolius.**—The pretty little red and yellow blossoms of this plant depending from the finely-cut leaves have an elegant yet striking appearance, and one wonders why it is not more grown. As a warm greenhouse shrub it is very fine, the glaucous foliage showing thus to great advantage, while single-stemmed plants are light and pretty for table decoration. A

*Celosia pyramidalis*.—This, as represented by numerous forms, is frequently used for bedding, the vivid-coloured blossoms being associated with the sober-hued subjects in forming some of the most bedded that are now so popular. The season of blooming may be varied to almost any extent by sowing the seed at different times, and during autumn and winter months the brilliantly-tinted blooms impart a colour totally wanting in *Chrysanthemum*, which forms the bulk of the flowers at that time met with. During the

yellowness of the foliage will quickly follow. Care is also necessary to prevent the water from settling round the collar of the plants, or rot will set in. For this reason it is always advisable when potting to keep the neck or collar of each plant slightly elevated. A good yellow fibrous loam five parts and one part well-decomposed cow manure free from worms, leaf-mould and coarse sand or road grit form a good rooting medium. Slugs must be watched for, as they are very partial to the young sappy foliage, a dusting of soot and lime over the ashes on which the pots stand being a good safeguard. When well established, *Calceolarias* like an occasional watering, say once or twice weekly, with weak diluted farmyard liquid. Old *Calceolaria* growers like to see the water beads hanging from the edge of the leaves at daybreak; this they consider a sign of good health. J. C.

#### GLORIOSA SUPERBA.

This beautiful plant appears to be getting more popular; at all events it is seen much more frequently than formerly. I noticed it in several gardens last week in the west of England, a very strong plant of a good form of it being in full beauty at King's Weston, the seat of Mr. P. N. Miles. It was growing on a wire trellis close under the roof of one of the plant houses, and the stems were apparently about 20 feet in length, closely covered with the bright showy blossoms. These are a deep orange, with tips of scarlet when fully developed, the segments standing erect owing to their recurving form. *G. superba* is not a difficult plant to grow, provided a few simple details are observed. It is a native of some of the hottest parts of the world, consequently it must have plenty of warmth while growing, and even when at rest must not be kept in a cold place. The bulbs are offered as imported, but established ones are possibly preferable, especially for inexperienced cultivators. They should not be disturbed unduly when shifting on, as the roots are easily damaged, being so brittle. Equal parts of good loam and peat, with a little dried and pounded cow manure and some rough, sharp sand, will grow it well. Bulbs that do not start freely may be placed in a brisk bottom-heat, such as afforded in a stove propagating pit, and kept there until the shoots are a few inches in length. They may then be slightly hardened, but will grow and flower best in a stove temperature. Direct sunlight is injurious to the foliage, but the plants, I think, are often kept in too dense a shade. While there are no flowers open the syringe may be somewhat freely plied about the stems. The roots must be kept moist until the foliage and stems begin to die down, when it must be discontinued by degrees. During winter the pots containing the bulbs may be laid on their side in any dry, warm shed or house, but they are not safe where the temperature falls below about 50°. When potting up the bulbs in spring, offsets may be taken off and set going on their own account, but if a large specimen is required, these are better left to increase its bulk. H.

#### TABERNÆMONTANA CORONARIA.

White scented flowers are always in demand, especially when they may be cut with their own foliage, as in the case of this pretty plant. When it is healthy the leaves take on a deep shining green that goes far to counteract their somewhat stiff appearance, while the style and carriage of the little panicles of flower are perfect. Few things look nicer under artificial light, so that it is useful for table decoration, while the flowers are produced over a long season. To grow the plant well it must have liberal treatment from the first. The best way to propagate it is by cuttings of the young wood, these striking very freely in a warm house, under a bell-glass or in a propagating frame. As soon as these are well rooted they may be potted into small pots and grown on as rapidly as possible in a brisk, moist

heat, stopping them frequently to produce a bushy plant. It is not so bushy in habit as a *Gardenia*, but will make a nice shapely plant with care. Large plants may be kept for years in pots, using a compost of peat, loam, and sand, with a little manure, but much the best results are obtained by planting them out in a bed of good soil. The growth they make under these conditions is remarkable, and they produce an immense quantity of flower. A suitable place for it, too, is planted in a warm conservatory, and one of the prettiest things I have lately seen was a fine specimen loosely trained over a trellis on a conservatory wall. Plenty of light and warmth and a moist atmosphere while growing are essential, and I have known excellent results follow the use of highly diluted soot-water for syringing the foliage and damping the house wherein it is grown. During winter growth is less active of course, and if the wood has been well ripened by exposure to sun and air in autumn, a cool, restful temperature suits it best. A very dry atmosphere is even now harmful, though naturally less moisture is needed than in summer. Insects, mealy bug especially, are fond of the foliage, and it is difficult to thoroughly clean the plants if ever this pest gets a firm hold on them. But this they will not do if the syringe is kept well at work and the plants are not starved at the root. Old specimens in pots need a lot of feeding, and there is nothing more suitable for the purpose than clear soot water varied occasionally with weak applications of guano. H. R.

#### FUCHSIAS.

SINCE the advent of the tuberous *Begonias* these have not found so much favour as formerly, yet even the great strides that have been made in improving the *Begonias* cannot eclipse the older favourites entirely. We still find some who go on raising and obtaining improved varieties of the *Fuchsia*. I lately saw some remarkably distinct varieties in Mr. W. Bull's nursery, particularly Alfred Raimbaud, with flowers of immense size, crimson tube and sepals, corolla of a rich purple and very full double. Tribute is a single variety with crimson tube and sepals and a fine purple corolla, the plant being of good habit. Mme. Carnot is a striking variety, the large double white corolla being veined and suffused with pink. In Duc d'Anmale the tube and sepals are of a bright red, corolla very full, double, of a clear white. A great number of other varieties were flowering in the same house, all of which were comparatively new, and showed improvement or some distinct characteristics from older sorts. Like many other subjects which will grow and flower freely under almost any kind of treatment, *Fuchsias* will well repay a little extra care and attention. The same plants will flower year after year, but where plants of medium size are required, young stock is decidedly preferable. Cuttings put in in the spring will make fine plants for flowering the same season.

The first thing is to have clean, healthy cuttings, which can only be done by starting the old plants where they are not likely to get infested with green fly or other insects. The stock plants can be thoroughly cleansed by fumigating or dipping, either of which can be done more effectually than after they have started into growth. There is a great advantage in getting strong cuttings. They require to be kept close until rooted, but should be gradually exposed before they have started into growth and potted off singly as early as possible. There are some varieties which cannot be grown into shapely plants without stopping, but some will make symmetrical pyramids without any stopping, and I much prefer plants grown this way; they must be grown on without receiving any check from the time they are started. If a good rich loamy compost is used for potting, large pots are not necessary. Some of the examples seen in Covent Garden Market well illustrate what may be had in a 5-inch pot, though for keeping up a succes-

sion of bloom in a conservatory it is certainly advisable to use larger pots. After the plant commences flowering, liquid or artificial manure may be used regularly, and with fair treatment there are few plants that will keep up a bright display of bloom for a longer period than *Fuchsias*. H.

#### ZONAL PELARGONIUMS FOR WINTER FLOWERING.

So much improvement has been made both the colour and habit of this section, that it is now possible to keep up a display throughout winter. Varieties are too numerous to enumerate I may, however, refer to the improved variety *F. V. Raspail* and the semi-double form of *W. Brighton Gem* as two of the most popular among those grown for market. One of the best double whites is *Mme. Rozain*. Those who would have greater variety should make their selections according to their own individual taste. It is difficult to judge which will prove good in winter, even if seen in summer. Those of coarse growth, with long joints, should be avoided. Generally those with a short branching habit of medium-sized trusses prove the best. Of course treatment makes a great difference in the habit but when a collection is seen, all being under same conditions, it is easy to select the best. Good summer treatment will go a long way towards ensuring successful winter flowering. Like to pot the plants early in June, select short-jointed, sturdy plants either from those propagated the previous autumn, or early spring struck cuttings will answer as well. A compost consisting mainly of good fibrous loam, with little manure and sand added, may be recommended, and I like to pot fairly firm. This to some extent prevents too vigorous growth being made. After potting, the plants may be set out in the open where they are fully exposed to the sun. Care should be taken that no water penetrates the pots. It is better to err on the side of keeping them too dry than over-water, and no manure should be used until they are in flower. All bloom-buds should be taken off as soon as they appear, and so sorts require stopping from time to time, while others will branch out freely without being stopped. The time of taking the bloom-buds will depend upon when the plants are required to be in flower. Those required to be in flower in October should now be gone over for the time, taking off the forwardmost trusses only. It takes about six weeks from the time the trusses first show until they are well in flower. The plants should be taken under glass early in autumn, or before we get heavy rains. When first housed, air should be left on night and plenty of room should be given. More bloom will be got from a dozen plants standing wide apart than from two dozen crowded together. Light and air, with just enough fire-heat to keep damp, will ensure success early in the season, later on more heat must be given. For winter work I prefer a house with a southern aspect though a light span house running north and south may answer fairly well; the direct rays of the sun, which are so beneficial, can better be obtained from a southern aspect. Although during the early part of the autumn it is best to keep the plants as cool as possible, later on more warmth may be given. One of the finest batches of zonal *Geraniums* I ever saw at Christmas-tide was grown in a lean-to house, facing the south, the plants being arranged on a stage near the glass, and the temperature was kept far higher than is usually given for such plants. H.

#### SHORT NOTES.—STOVE & GREENHOUSE.

**Variegated Pelargonium Mrs. Parker.** This is a vigorous-growing, yet compact-habited variegated zonal which makes a delightful pot plant, with flower pink in colour. I am not sure if it is in commerce, but I saw it recently at Messrs. W. Balcin's.

ns' nursery at Hassocks, where it seems to be grown gely. Whether for the flower garden or pots it is most desirable variety. The variegation is white, leaves being somewhat deeply edged.—R. D.

PARK AND WOODLAND.

GERMAN FORESTRY.

REGENERATION AND ROTATION.

ANY of the German forests are produced by natural regeneration. In hard woods, the Beech, sometimes mixed with Hornbeam and other species, affords the best example of natural generation and illustrates the effects of crowding well, because, as is well known, the Beech naturally branchy and wide-spreading in the open, like others of our British forest trees which also conform to plantation culture, developing trunk instead of lateral branches of little or no value. In these German forests of Beech what strikes the English forester is the density of the young trees and the great height they are allowed to reach before thinning is attempted. The regeneration process with the Beech begins with the first opening of the overhead canopy, when the light is admitted to the ground. The crop will then be approaching 10 years of age, and the regeneration process occupies about twenty-five years, by which time the new crop has been established from the naturally shed seed of the previous crop in its first stage. At this young stage a Beech forest looked at casually has the appearance of a thin English wood with underwood, and has been mistaken for such by English foresters. But they are not like our woods, for the mass of underwood seen consists not of Yews, Hollies, Hazel, and such things, but exclusively of young timber trees, the same as the preceding crop. There is no attempt at thinning till the trees are nearly forty years of age, in ordinary rotations. The overhead canopy is carefully preserved, and the woods are dark and found almost destitute of undergrowth, but as soon as the light is admitted the young trees come up in millions, looking at a distance like masses of wild Raspberries. At this stage I tried to form some idea, by counting, how thick the plants were when about 18 inches high, and calculated that there were from 80 to 100 to the square yard in most places. The struggle for existence now sets in, and by the time the trees are above one's head they have decreased in number to about ten or less to the square yard, standing just like seedlings in a hotbed. The struggle continues until "height growth" is attained, and at this advanced stage the trees are so dense that the sides of the paths are trimmed like hedges to keep the road clear. One seems to be walking between two Beech hedges, only the other side of the hedge is forest. By the time the trees have reached the height of 40 feet, or perhaps more, according to soil and condition, they have thinned themselves proportionally, but are still rank and the canopy broken. Many trees in process of being "othered"—the "dominated trees"—are ready to be removed, and are thinned out for firewood. In thinning, the operator looks up at the tops and not at the ground, and if the removal of any tree is going to make a hole in the overhead canopy it is left. The consequence of this is that the trees, especially in Fir woods, are not so regularly distributed over the ground as we try to have them in England. I counted, where I happened to stand, as many as four Scots Firs, each 50 feet high or so, in the space of one square yard, and close by these three others standing in a line about

20 inches apart—groups, as it were, here and there, perhaps 5 feet or 6 feet apart, but above the canopy was complete. It is at about this middle stage that the condition of the hard woods like the Beech strikes one at first unfavourably, who has been accustomed to Scotch thinning practices and theory. The trees up to from 30 feet to 60 feet in height or thereabout, though tall and straight, are of all girths, from rails no thicker than one's arm up to good poles of useful measureable dimensions. In this country the smallest trees would be classed as rails in a fall of timber, and sold for next to nothing as corkwood or "cratewood," and a wood crowded with such examples just answers to Brown's description, in the "Forester," of a wood ruined from want of thinning. Such long slender rails have reached a stage after which, in Britain, it is thought impossible they can ever become useful timber trees. Our idea is to carry trunk bulk on along with height growth from the beginning, but the German idea, put into English, is to get height growth first and girth afterwards. The wand-like poles look as if they would never do this, but they do. I walked through these Beech forests from the first to the last stage, where the rotation period was about to end. Here I measured an average example of Beech which squared by the tape



In a German forest. High forest gloom.

about 17 inches near the ground, and 13 inches about 90 feet up, with a considerable tuft of branches above that, but none below, the trunk being clean and wonderfully round and cylindrical up to the above height. I said to the oberforster, "Now, has this tree, and all those like it standing here, grown up to its present dimensions under the crowded conditions, from youth to age, that we have seen where we have come through to-day?" and the answer was, "Yes, you have seen it all." I could have selected bigger trees, elsewhere in the valleys, where they reached 150 feet, but the above examples were about 1000 feet above the sea, or perhaps a little more. The Firs are produced under exactly the same conditions. One passes through compartment after compartment till the end of the rotation is reached in the mature crop. So much for the results. The German theory is as follows: The crowding produces clean, straight trunks, and as the dominant or tallest trees are left, and keep pace with each other, they are bound, while their tops keep alive and in health, to deposit a layer of wood in their trunks annually, and, given the required number of years, the girth desired is simply a question of time. The increase to the girth may be small, where the top of foliage is restricted, but it is constant while the tree

lives. The trees have remarkably small heads for their length, according to our ideas, but large enough to produce good stems. When thick trunks are wanted, the heads of the dominant trees are allowed greater development, and the annual rings become broader, and *vice versa*, but timber of the best quality is produced by those trees in which the annual increase has been most regular and the rings are of moderate breadth. The average production to the acre as regards quantity is not so much affected, because the thicker the trunks the fewer the trees, and so on. The Germans do not go in for very big timber. Plenty of it of useful size is what they want, and a vast proportion never passes pole size. I saw nothing that we could not do equally well at home in the same way, and occasional examples are to be seen here and there on almost every estate. There cannot be the least doubt but that the German system of forest management could be easily adopted in this country, and that, too, without interfering with game preservation in the least. Good crops of timber and pheasants, &c., could go on perfectly well together by a right method of procedure. One could see in these German forests that, if game were an object, dense coppice shelter could easily be provided by simply leaving a space here and there for it to grow, and under such conditions, what we call underwood cover would grow better than under the trees. Without this, however, the Spruce, Scotch Fir, and hard wood forests of Germany produce ideal coverts for pheasants, wild pigeons, and other game, both fur and feathers. The Spruce and Beech form dense covert up to a late stage of their existence, and as by the compartment system a regular succession of plantations is always coming on of all ages, covert is abundant. In Scotland no better covert tree for pheasants and hares is found than the Spruce, affording as it does both shelter or shade and an incomparable roosting tree for the birds. Moreover, for shelter in winter these dense German woods quite beat a thin English wood, even though the undergrowth may consist of bare poles only. In winter the canopy overhead prevents excessive radiation, and the stems of the trees filter the gales, so that neither severe cold nor keen winds are felt. I was in a dense high forest one day when a gale was blowing outside, and yet so still was the air inside the forest that the gale would hardly have deflected the flame of a candle. In short, with regard to the production of timber, as Professor Schlich states in his third volume, "the principles of forest management hold good all over the world," and there is not a wood, however small, in this country that might not have been made a miniature counterpart of a well-managed German forest. The allotments in Holland, planted with a crop of trees instead of corn, show this conclusively. As to game preservation, gentlemen who are sportsmen should judge for themselves what is most practicable and best to be done, to have good crops of timber and plenty of game also.

REGENERATION BY PLANTING.

The purely natural Pine forests of Germany are not so common as one might think. Many of them have disappeared by the axe and are being replaced by planted forests. Some are raised from seed sown on the spot, but wherever I went in the Hartz, and in Thuringia,

planting was the rule. The worst and highest situations are give up to the Spruce, but Spruce and Beech do well together. What Dr. König called an ideal compartment consisted of Beech and Spruce, the latter planted ten years later than the Beech, but now 20 feet higher. This, which may be called a handicapping process in forestry, is practised by German foresters in mixed woods to prevent strong-growing species dominating the weaker ones. In England any sort of mixture goes in pell-mell at the same time, and the smothering process goes on from the very first, necessitating far more attention than German plantations receive. The Germans also pay much attention to the shade-bearing power of different species and plant accordingly. The Spruce bears shade well, and Oak woods crowded beneath with Spruce are to be seen, but Beech is the shade-bearer *par excellence*. In the photo of a "clear cut" in my first chapter the spray seen in the gloom of the forest is from Beech trees 50 feet or 60 feet high, growing as straight as the Spruce between their legs, as it were. In planting Spruce and Scots Fir the hack is used instead of the spade, and the plants are about 6 inches high and home raised. Regeneration begins in the home nursery, a very homely affair, but well adapted to the purpose. These nurseries are little enclosures here and there in the woods, railed round with small Firs cut near. The ground is dug and cleaned and the seed sown, and while an English nurseryman would be sowing and transplanting and adding to the price of his forest trees every time they were handled, the German forester has his plants out and in the wood at a tithe of the labour. Of course the work is all planned, and stock does not accumulate in the nursery from want of time to get it out, and it is not wasted, as happens in both public and private nurseries here. In the German forests there is no rank undergrowth to contend with, and the trees can be planted out very young and small without fear. In the Hartz Mountains 4 feet apart appears to be the usual distance between the plants, but in the Thuringia Waldt 3 feet is common. This distance is allowed in the more favourable localities and soils, but at high elevation "bush" planting is adopted, three trees being put into each hole sometimes less than 3 feet asunder. This is to ensure an early covering of the ground. In plantations thirty years old the three trees in each hole are in many cases all still alive, but as a rule one takes the lead and the weaker ones die off. I asked the forest officer how he reconciled the 4-feet-wide system with the opinions of German authorities, that complete cover of the ground (canopy) should be established if possible within five years in order that the lower branch growth might be arrested, and his reply was that thicker planting was desirable, but the initial expense was greater. The Spruce and Scotch Fir forests, I must say, do not look well inside in the earlier stages, when the lower branches are all dead, but have not yet fallen off. Later, however, when this has taken place a long way up the trunks of the trees, a Pine forest is a beautiful sight, and the long, straight, narrow forest paths, with the tall clean trunks ranked densely in a straight line on each side, look more like a cathedral aisle than anything else one can think of. Indeed, when looking at the tall columns inside of Cologne Cathedral, it occurred to me that I could have easily picked out trees of different sizes in the Hartz forests which, when packed together in proper order, would have made a pillar almost exactly the same as the massed columns that supported the nave, so tall and cylindrical are the trees. After plant-

ing, little attention is bestowed on the compartment for perhaps as long as twenty-five years, and in some cases more. Then a thinning out of the dead and dominated trees takes place. These are not thicker than one's arm or thereabout and are long and even. The best go for deer fencing, bean sticks and firewood. Towards the end of the rotation period (100 years), at perhaps the age of seventy-five years, the timber crop begins to be reaped, ending when the last fall is cleared off. British foresters are loth to believe that such crowded woods can ever grow into fine massive timber, but there are the trees in all the stages, miles upon miles of them. The photo of "A clear cut" in last chapter shows a crop of Spruce, in which every tree is just as perfect a timber tree as once could imagine.

As regards the weight and value of the timber crop per acre, from 6000 cubic feet to 8000 cubic feet in the last fall at about 6d. per foot seems a common thing from what I was told, and what I saw and calculated myself. That would pay even in Britain, and pay well on land, like the German hills, worth so little agriculturally. That is Fir timber, but our Ash, Sycamore, Larch, Elm, &c., would be worth much more. The German forests are mostly "pure," and Scotch Fir, Spruce, Beech and Oak form the staple crops. Ash is beginning to be appreciated, but, as a rule, the Germans are behind us in the variety of species cultivated. They have just taken up their natural woods as they found them, and the whole art of German forestry consists in adhering to Nature as closely as possible. They have studied the principles on which Nature proceeds in the manufacture of timber, and they have explained these principles and reduced them to practice in a systematic way. "It is an art, but the art itself is Nature." Our British forestry is an empirical invention only, having no foundation in either Nature or art. It is just the exact opposite of both Nature and of German practice, so far as the production of timber is concerned, and produces the exactly opposite results.

The above quantities to the acre are ordinary. In experiments conducted in the dukedom of Saxe-Weimar they have been much exceeded. Herr Kallenbach showed me the complete record of results from a crop of timber grown on one hectare. The quantity amounted to 112 cubic metres, which is equivalent to close upon 20,000 cubic feet per English acre. This was sold by auction at the rate of £475 per English acre or thereabouts, 27 per cent. being sold for firewood. The timber consisted mainly of Fir ninety years of age.

#### ROADS, TRANSPORT, AND CONVERSION OF THE TIMBER.

Much forethought is exhibited in the laying out of the forest roads for the removal of the timber in the mountain regions. They are all laid out at a certain gentle gradient, winding through the woods in a continuous ascent to the highest elevations; consequently the timber is all hauled down hill principally by cattle. I took the contents of one load of timber—an average example—and estimated it about 2½ tons, or 100 cubic feet, loaded upon a timber waggon not nearly so heavy or expensive as the timber waggons used in England, and drawn by three horses, the load seldom reaching the above weight. Our wood roads at home run anyhow, and the haulage is much more expensive. Six milch cows hauled two waggons like the above, and would be milked when they got home. Everywhere the work is done with marked economy, and, judging from the rate of wages

and other charges, I should say that German forestry is conducted at about one half the expense incurred here. Another point in favor of German management is the speedy conveyance of the timber on the spot. Factories are brought to the forest, and not the timber to the factory, as with us, involving expense that has to come off the price paid for the timber in the wood. Of course the German forests have created permanent industries that employ a large portion of the population. In some parts builders are carpenters more than masons, and many of the wooden dwellings of the better classes are models of comfort and seem to endure. The entire framework of many houses is of Spruce or Scotch Fir beams, many of them apparent of great age. After the wooden framework completed the filling in of the walls with plaster or brick does not seem to be a difficult affair. Some of the most famous castles in Germany—the Wartburg, for example, a palace inside, appears outside to be built principally of timber and red tiles. This is a beautiful place, but without any pretensions to fine law or gardening—no ornamental trees, no Hollie Rhododendrons, Yews, Laurels or other shrubs worth mentioning, only good approaches, rough park and dense forest up to the very windows of the mansion, but no remarkable trees. So far as I had time to look, my travels being almost confined to the forests, I thought German flower gardening poor, neither bedding-out nor hardy plants being remarkable. The woods are the gardens of Germany. For perfect order and good management they look more like ornamental woods than timber forests, and there are few or no fences, and the roads through the forests are also the highways, the public have full access to them and enjoy them greatly. Everybody, even the humblest, seems to understand the importance of maintaining the forest at a high standard and of undiminished extent. Forestry is quite a recognised institution of the first importance, and more than once apprehensions as to the state of the forests have nearly caused a panic amongst the public in the wooded regions of Germany. J. SIMONS.

*The Gardens, Wortley Hall.*

## FRUIT AND VEGETABLE CROP

### EASTERN.

**Opped Hall, Epping.**—The fruit crop the whole in this neighbourhood is very poor. Strawberries being an exception, also Peaches and Nectarines in this garden, but it is somewhat remarkable, with regard to them, that on an inner south wall all the trees are bearing very good crops, while on the outer (south) wall there are several trees with no fruit at all on them, a many of the sorts are the same on both walls; instance, Noblesse Peach, outside wall no fruit inside wall a good crop; Elruge Nectarine, outside no fruit, inside a good crop. All the trees were covered up the same in the spring. Apples are hardly half a crop, the best being Lady Early and Moorpark. Morello Cherries are a fair crop, but of other sorts the trees are too young to bear, and I have no other standard trees but Cherries here. I attribute the failure with Raspberries to the fearful ravages of the sparrow amongst the buds. Of Black Currants I had but half a crop. I have gathered a nice lot of Figs from outside trees, and still have a good show, the Brown Turkey being a little late. Plums are quite a failure on standard, bush wall trees, with one exception, and that is a small trained tree of Pershore Yellow planted last year against a north wall, the only tree here, but

all plant more, for it is a good cooking Plum, have never known it to fail either as a standard trained tree since first it came under my notice no twelve years ago. I have seen some good crops of Pears about here on standard, pyramid and wall trees, but mine are very poor, taking them as a whole. Raspberries showed well, but failed from the want of rain. Gooseberries were a fair crop, and would have been a heavy one if not for the blight taking the buds. I was very much troubled with mice eating the Strawberries this season, spoiling what would have been a very heavy crop, the late frosts doing very little harm. I think Apples must be looked upon as a failure about this part, for I have scarcely any, and other people are the same. There is now and then a tree with some on, but the fruit is very poor. Medlars, Mulberries andinces are not very good this season.—JAMES HIGBROCK.

**Coldham Hall, Bury St. Edmunds.**—The fruit crops in this neighbourhood cannot be described as good, Apples and Plums especially being very much below the average. Here cooking Apples are fairly good, but the choice dessert kinds are almost a total failure; the old Keswick Codlin and Dr. Harvey alone are bearing full crops. Plums on young standard trees are only about half a crop; on the walls none. Orleans and The Czar are the best. Strawberries have been good, the season longer than last year; but Raspberries, on the other hand, were quickly over. Gooseberries have been abundant and good, but the late varieties are ripe before the usual time. Young trees on espaliers have borne good crops and are making capital progress. Red Currants very short, Black a full crop of the fruit, and White about an average. We have very few Pears on espalier or standard trees, Jagonelle and other early varieties being quite few. In the earlier stages Peach and Nectarines outside were in a bad plight from blister, but they have outgrown it now and are carrying a heavy crop. Inside the trees have done remarkably well, the fruit fine and of good quality, the appearance of the trees being all that could be desired. Walnuts are very uneven, some trees being very heavily laden, while the crop on others is very thin. Cob Nuts and Filberts are carrying good crops.

Vegetables of all kinds have been, and are, abundant and good, but each season shows more and more plainly that stocks of seeds of all kinds are getting mixed and not saved with proper care. Onions raised under glass and planted out are a very good indeed. Early Peas were good, the season fair, and since the welcome rains the rows are looking well. Again Autocrat is exceptionally good and Chelsea Gem is very useful sown late in May. Lettuces have been a failure through the summer, one of the very best to stand drought being Sutton's Favourite. Turnips and root crops generally were very good early in the season, but felt the drought severely. Potatoes came in later than usual, but have been a capital crop in every case so far. The later quarter will need lifting to prevent second growth, but the rain came just in time for the latest field crops. Broccoli and other winter crops were suffering badly in July, but are now growing freely.—H. R. RICHARDS.

**The Abbey Gardens, Ramsey, Huntingdon.**—Here in North Hunts the fruit crops are far below average. Plums with a few exceptions are a failure; Apples half a crop; Pears the same. Strawberries are a heavy crop of good fruit. Fish fruits, such as Currants, Gooseberries, &c., are only half a crop. Walnuts are a failure. Vegetables have done extremely well with few exceptions, the following varieties of Peas being remarkable for their productiveness and high qualities: Veitch's Earliest Marrow, Prodigy, King, Gradus, Autocrat and Masterpiece. Potatoes are below average owing to late frosts.—F. W. SEABROOK.

**Donnington Castle, Peterborough.**—The fruit crops in this neighbourhood are far below

the average. We had an excellent show of bloom here, and in some cases a good set of fruit, but the continual cold winds in spring, with an occasional frost, proved too much for it. The only Apples that are carrying a fair crop are Kentish Fillbasket, Lord Suffield, and Alfriston, while among the Pears Glou Moreceau and Louise Bonne of Jersey are cropping fairly. Plums are quite out of the question, hardly any of the trees carrying a dozen fruits, excepting the Orleans. One tree of Morello Cherry on an east wall bore an excellent crop of fruit, while those on the north and west aspects are barren. Raspberries also have been almost a failure, while Strawberries have been above the average.

Vegetable crops generally are good. Early Peas did remarkably well, particularly a new one sent out by Dicksons, of Chester, called Dicksons' Harbinger.—ARTHUR G. GATLAND.

MIDLAND.

**Gopsall, Warwick.**—The outlook during the spring had every appearance of a fine crop of fruit, the blooms on everything being most prolific, especially Apples and Pears, but owing to the cold, cutting winds and severe frosts during April and May many kinds suffered badly. This is especially noticeable here with Apples, for, with the exception of the Codlin tribe, they are very thin, although in some of the neighbouring gardens and orchards I notice a full crop of most of the popular varieties, whereas in others almost adjoining there are but few. In our own case the orchard, which is situated a short distance from the fruit garden, is this year quite barren of fruit. Pears in the walled-in garden are plentiful with such varieties as Marie Louise, Louise Bonne of Jersey, Trout Pear, Easter Beurré, Glou Moreceau, and Beurré Bosc. Plums are a very thin crop, as are also Cherries and Apricots. Peaches and Nectarines are a fair crop, but much subject to parasites, and have taken a deal of labour to keep going. Of small fruits Black Currants are a light crop, also Raspberries. Gooseberries and Red Currants are average crops.

Vegetables, although very backward and slow in making a good start in the spring, have done well, the early crops being good, especially Dicksons' Harbinger Pea and Sutton's Excelsior Potatoes, small, but of good quality. The later kind of vegetables are showing the want of rain, such as Peas, Cauliflower, and Lettuce, ripening up and running to seed very quickly, and they can only be kept going by mulching and watering copiously.—J. LEE.

**Broomfield Hall Gardens, Derby.**—Some of the Apples are good this year; in fact, far better than last year. I have a crop of Mr. Gladstone, a good bearer with me on pyramid trees. Worcester Pearmain comes next, bearing good crops (does well here), and the following sorts are all bearing good crops: Pike's Pearmain, Domino, a good old sort for cooking, and in my own opinion hardier in bloom than any other sort; Russian, Lord Suffield, Potts' Seedling, Warner's King, New Northern Greening, nearly perfection in growth, bearing and quality; New Candwell, good bearer, tree a large grower, but I would like the fruit a little larger, and Blenheim Orange. I still like the old Eve Apple, which is a good bearer and full this year. New Bess Pool is a grand Apple, but rather poor bearer, the bloom easily killed by frost. Many of the Pears this year are fruitless. Doyenné d'Été on pyramids is good, but the standards are a failure. The following sorts are good this year on the pyramid: Louise Bonne of Jersey, Marie Louise d'Uccle (it is twenty-four years since I planted this sort and I have never known it to fail after it got established), Beurré d'Amanlis, Beurré d'Arenberg. Plums on standards are a failure, also on walls except Victoria. Gooseberries only moderate crop. Raspberries a failure. Black Currants none. Apricots a few. Red and White Currants good.

Spring Peas, that we have some years gathered at the end of May, this year were gathered in the second week in June, but on the whole they have cropped well. Early Potatoes were caught with frost and have turned out under average. Late Potatoes are suffering from the long dry weather and crops will be light. Onions good crops. Lettuce failed to heart from want of rain. Early Cauliflowers are moderate, late Cauliflowers looking well. Dwarf French Beans here are only moderate. Scarlet Runners are now doing better and will be good crops. Other vegetables looking well.—F. OLDHAM.

**Burghley Gardens, Stamford.**—In the early part of the season there was every sign of an average fruit crop, but owing to the easterly winds and late frosts it seems to have suffered more or less. Out of a great number of Apple trees here, Keswick Codlin, Lord Suffield, Grenadier, Schoolmaster, Golden Noble, Warner's King, Barnack Beauty, and several Pippins are carrying very good crops; whereas other kinds are totally bare. Pears on walls are fairly good, of which late kinds predominate. The most prolific are Beurré de Jonghe, Bergamote d'Espèren, Van Mons Leon Leclere, Winter Nelis, Easter Beurré, Uvedale's St. Germain, and Catillac. Morello Cherries are an average crop, very fine, and free from insect pests. Red Currants good both on walls and bushes. Black Currants scarcely any, and Gooseberries none at all. Outdoor Peach trees, although every effort was made to protect them, were blistered very much by the cold east winds so prevalent in May and June, which not only caused the blossom and the set fruits to fall off, but have very badly crippled the fruiting wood of the coming season; yet I may say that only a few varieties have suffered in this manner, the worst being Barrington, Late Admirable, Crimson Galande, and Princess of Wales; whereas there are several varieties in the same aspect which have entirely escaped being blistered; still these have lost the majority of their fruit.—A. METCALFE.

**Enville Gardens, Stourbridge.**—This is the worst year we have had here for about six years. Peaches outside fairly good. Nectarines fair. Apricots bad. Plums poor; some varieties are bearing nice crops. Rivers' Early average crop. Victoria very good, scarcely ever fails. Orleans very good. Kirke's very good. Jefferson's very good. Denniston's Superb good. Angelina Burdett good. Coe's Golden Drop under average. Apples are a bad lot generally, the following doing best: Lord Grosvenor, Golden Noble, Lord Suffield, King of the Pippins, Stirling Castle, Warner's King, Cellini, Ribston Pippin, Mère de Ménage. None of these are bearing an average crop, however. Pears are the best fruit crop here, the following being best: Williams' Bon Chrétien, Gratioli, Doyenné Grey, Louise Bonne of Jersey, Ne Plus Ultra, Glou Moreceau, Marie Louise, Hesse, Doyenné d'Été. Gooseberries very good. Currants (Red and Black) good. Raspberries good. Nuts (Cob and Filbert) heavy crops. No Walnuts grown. Hazel Nuts in woods and hedgerows immense crop.

All kinds of vegetables have done well here, Cauliflowers especially, but Peas have suffered a little from drought and midew. Potatoes (early kinds) fairly good crop and of very good quality, especially Puritan, which has been best of the early kinds. Second earlies are looking very well, but none lifted. All kinds of late ones are looking well, and promise a good yield.—G. H. GREEN.

**Eastwood Grange, Ashover, Chesterfield.**—In this district Apples and Pears are much below the average, and in many places a complete failure. Plums and Cherries are also very poor. There was an excellent show of bloom in the spring, but the late frosts and heavy wind proved very destructive. Gooseberries in these gardens are an enormous crop and of good quality. Currants a good crop, but small. Raspberries are a good crop, but deficient in flavour.

Vegetable crops of all kinds are good. Peas up to date have been exceptionally good and the late

varieties promise well. I find Criterion for the main crop one of the very best, both for quality and quantity combined, and it seems to withstand the hot weather better than many of the main-crop varieties. Cauliflowers have been good and promise well, the variety Veitch's Extra Early Forcing being particularly good from plants sown in February. I cut Cauliflowers of medium size the first week in June. Winter Brassicas promise well. Potatoes are a good crop, but small.—F. HARBROW.

**Barkby Hall, Leicester.**—Apples are variable, being good crops in places, but not quite an average crop on the whole. Pears the same. Plums are scarce in the open and on the wall trees, Victoria bearing the best. Peaches and Nectarines are not quite an average crop. Apricots good average crop. Cherries decidedly under the average. Gooseberries good full crop. Currants, Black, very scarce; Red, good crops. Strawberries good heavy crops. Nuts good full crops. Walnuts average. Raspberries fair average crop, but scarce in places.

Peas have been good, considering the dry weather, especially in trenched ground, also on heavy land. Dwarf Beans have been fair, but runners have dropped their blooms. Cauliflowers fairly good. Spring Cabbages were very late; I had some sown in May, 1896, that gave the best heads as spring Cabbage. Celery has run to seed far more than usual this year. Onions not quite a good average crop in this neighbourhood, rather small. Early Potatoes good crops, but rather under size; no disease at present.—J. LANSDALL.

**Castle Gardens, Warwick.**—Fruit on the whole is decidedly under average; the only varieties of Apples giving full crops with me are Ecklinville, Warner's King, and Stirling Castle. Cox's Pomona, which rarely fails in this district, was a very scanty crop. Speaking generally, Pears may be termed a failure; the exceptions are Beurré d'Amanhis (heavy crop), Glou Morceau (average), and Jargonelle (light, but clean and good). Plums very thin. Royal Hative, Pond's Seedling, and Goliath are the only varieties I have met with carrying full crops. Peaches, Nectarines, and Apricots much below average. Figs on walls good crops, ripening well. Morello Cherries average, good. Raspberries and Black Currants average, good. Red Currants and Gooseberries under. The latter, where grown as single cordons, are in many instances a heavy crop. This is a fact which cultivators should note and act upon. Strawberries a heavy crop of good quality. The season was, however, a short one, owing to the absence of rain. Filberts are a wonderfully heavy crop.

Vegetable crops are generally good where high culture is given, but in poor soil, where deep digging and liberal manuring are not practised the produce is, as a matter of course, inferior in quality and small in bulk. With me Carrots, Parsnips, and Beet never looked better. Onions are not quite so large as usual, but still a fine and even crop. Early Peas turned out well. Mid-season varieties were not so good, owing to the presence of drought just at the critical time. A continuous supply of Lettuce has been difficult to maintain. The copious rains received during the last few days came just in the nick of time to save large breadths of the Brassica family, and the prospect of a good supply during the coming winter is good. Potatoes are a good average crop, and but for the fact that the tubers are somewhat smaller than usual, the crop would have been a heavy one. A few days ago I noticed some diseased tubers among a crop of Early Puritan which was being lifted.—H. DENKIN.

**Hopton Hall, Wirksworth, Derbyshire.**—Apples, the principal fruit grown, are good crops, with fine fruit. Nonsuch, Irish Peach, Keswick, Lord Suffield, and Old Northern Greening are heavy crops, as are also Bramley's Seedling, Stirling Castle, Newton Wonder, Warner's King, Ecklinville, Cellini, Fearn's Pippin, Gascoigne's Scarlet Seedling, New Hawthornden, King of Pippins, Lord Grosvenor, Margil, New

Northern Greening, Potts' Seedling, and Worcester Pearmain; other varieties moderate crops. Plums very few; Victoria and Rivers' Early poor crop. Damsons are a failure in this district; one large tree in my garden at home on the west side has looked like a tree scorched all the summer—from the effects of frost. Cherries, May Duke good crop; Morellos half crop of last year. Gooseberries fine crops (though I hear of many failures higher up the Peak of Derbyshire); these are mostly on standard trees. Black Currants a failure; Red good; White excellent, still hanging. Raspberries very good, still gathering (August 17).

Vegetables are excellent this year. Potatoes are clear and good eating; not over large, but full crops. French and Scarlet Runner Beans are early and good. Peas excellent, just in full bearing now (August 17).—GEO. BOLAS.

**Enderby Hall, Leicester.**—Apples under average with the exception of Keswick Codlin, of which variety there is a good crop. Pears fair crop both of early and late kinds. Plums very bad. Apricots under the average. Gooseberries good. Red and Black Currants good. Raspberries fair crop. Strawberries very good. Walnuts and Filberts fair crops. The fruit crops suffered from the severe frost during April and May.—J. W. SIGEE.

**Henbury Park, Macclesfield.**—The Apple crops here and in this district are very thin; the only kinds carrying good crops are Mère de Ménage and Lord Grosvenor. Pears are a very light crop. Plums much under average. Damsons none. Cherries average crop and very fine fruit. Strawberries very good. Raspberries, Gooseberries, and Red Currants average crop. Black Currants none.

Vegetables are very good all round. I never saw them look better.—W. CHEESBROUGH.

#### WESTERN.

**Batsford Park, Moreton-in-Marsh.**—Fruit in this garden and neighbourhood, with very few exceptions, has not been so scarce for the past ten years, and in many instances the crop is a total failure. This may be the result of a combination of causes. Last autumn was very wet and sunless, after a hot, dry summer, and the wood had scarcely a chance of ripening properly; there was a prevalence of cold north-easterly winds in the spring, and several frosts occurred about the middle of May. Apples had a scarcity of blossoms, especially on orchard standards, and the crop is far below average, many large trees being without a fruit, including Blenheim Orange, which is extensively cultivated and does well when established. A few cooking varieties are better, including Keswick Codlin, Stirling Castle, Tower of Glamis, Warner's King and Cockpit, the first-named as a standard and the others garden pyramids. The best dessert Apples are very scarce. Very few Pears on trees in the open; on a south-west wall, Marie Louise, Josephine de Malines and Doyenné du Comice are bearing better. Peaches and Nectarines were badly blistered and the crop is very light, the best of the first-named being Dymond and Royal George, and of Nectarines, Elruge and Hardwicke Seedling. Nearly all of the trees lost their foliage, at least it had to be picked off, and some have not recovered sufficiently to be worth keeping. Apricots were under average for this garden, as they succeed well as a rule; but the quality was pronounced excellent, and the trees have made fine growth. Dessert Cherries were very good, and the trees kept fairly clean, while Morellos flowered splendidly, but nearly all the fruit dropped. We attributed it to frost when in flower, as these trees are generally to be relied upon for a good crop. All the best Plums, Gages of all sorts, &c., are very scarce; Victoria and Pond's Seedling are bearing much better and are most valuable this season. Strawberries were a heavy crop, though the quality on the whole was not considered so good as last year, and

the fruits were not so bright in colour as usual. They suffered a little from droug towards the end of the season, which was near the middle of July. Raspberries were plentiful though rather small, the weather being very hot and dry at the time of ripening. Gooseberries and Currants were much injured by birds taking the buds (even Black Currants do not escape) and there seems nothing to save them except netting all winter and spring, and this is not always a certainty. Dusting with lime and so is a preventive to a certain extent, but with heavy rains it soon washes off. In the cottage gardens bush fruits have been plentiful. The destruction of buds is not so serious here as in larger gardens, where there is comparatively less disturbance. Nuts of all kinds are plentiful.

Vegetables taken altogether have done very many things better than usual. Spring Cabbages were rather late, as the plants did not get away well in the autumn, although started at the usual time. Broccoli was plentiful and good. Early and successional sowings of Peas bore heavy crops, which matured rather too quick for all to be used, and the later ones have come on earlier than was intended. Asparagus was plentiful, but not so fine as in some years. Early Potatoes gave an excellent yield, and very good in quality; some planted for succession of the same varieties are partly diseased. Late ones have been looking very promising, but at the time of writing it is too early to judge of the crop. Magnum Bonum is still one of the most reliable for this locality. Beans have been doing well. Cauliflowers also, considering the hot season, roots are much better than at this time last year, and green winter vegetables have grown perhaps more than is desirable, especially Broccoli, which rarely stands the winter so well without being too sappy. Seakale growing on a slope in a field with late Potatoes for forcing seems to have been suited with hot sunshine, as it has rarely looked so strong. Lettuces have been good, and means of sowings made during the hot weather on a north border an unbroken supply has been maintained.—JOHN GARRETT.

## GARDEN FLORA.

### PLATE 1135.

#### OXALIS ENNEAPHYLLA.

(WITH A COLOURED PLATE.\*)

This is one of the most distinct and attractive of the many species of Oxalis known, but it has never attained to the position of a garden plant because until lately it has been practically beyond reach. It is a native of Fuegia and the Falkland Islands, being abundant in the latter where, according to Sir Joseph Hooker, it grows on banks overhanging the sea, covering them with a snow-like mantle of white flowers in the spring. It was introduced to Kew along with other plants brought in a Wardian case from the Falkland Islands in 1876 by H.M. Challenger, but, although kept alive ever since it has remained a *rara avis* until recently, as failed to ripen seeds or to afford any other means of multiplication. In 1895, however, Kew supplied a gardener, Mr. A. Linney, of Government House at the Falkland Islands, and he has since sent to Kew quantities of the and other plants of interest peculiar to the region, among the latter being the remarkable Senecio Smithii, a peculiar form of Lomara alpina, Sisyrinchium filifolium, and others. The Oxalis has done well in the rock garden at Kew being planted in a somewhat shaded and moist position against a stone; here it flowered free

\* Drawn for THE GARDEN in the Royal Garden Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.



WHITE CROWN GARDEN



June. Some 9-inch pans were also filled with it, and these were kept in a cool frame to be brought into the alpine house in spring; these were at their best in May.

The root-stock is ovate, tubercled, bulb-like, the largest 2 inches long; the leaves have short reddish petioles and a wheel-like whorl of from one to twenty leaflets, which are glaucous and rather fleshy; the flowers are borne singly on short stalks and are about 1½ inches in diameter, the sepals ciliate, the petals overlapping, pure white or tinged with lilac along the veins. The leaves all wither in the autumn and the plants rest to rest for the winter. If grown out of doors it would be advisable to cover it with a flannel or pane of glass to ward off excessive moisture and severe frost during the winter. Some notes on the best species of *Oxalis* for the garden will be found in *THE GARDEN* for May, 1890, plate 755, along with a picture of *O. Bowieana*. W. W.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**INTER TOMATOES.**—The plants should be well established in their fruiting pots by now, but move them to a light, airy house directly wet, hilly weather sets in. To leave them in the open after this there is a danger of the roots receiving too much water, growth being long-jointed and sappy, and what flowers do form will fail to set properly. A more sturdy growth will be secured if the plants can be placed where they receive plenty of light and air during the day with little artificial heat at night. Keep them to a single stem if possible, as there is a better chance of the fruit setting, and more plants can be arranged in a small house. Young, vigorous plants which are in full bearing should have all fruit that is larger than a marble removed if they are expected to keep bearing through the winter. This will relieve them for a time and cause fresh flower-trusses to form. Give a surface dressing of rich loam and bone-meal if the plants require assistance and thin out old leaves. As most of the winter fruiters will be destroyed in the spring, a batch of young plants should be in readiness to succeed them. These are obtained by sowing seed at the present time. It being desirable to keep such plants as sturdy as possible, sow the seed very thinly in pans filled with rather stiff loam, and only subject them to gentle warmth. When sown thickly in rich, loose soil and forced quickly, they seldom prove serviceable. They should be potted up when large enough and kept at the glass.

**TURNIPS.**—Winter crops should be thinned early, or there is a danger, when they are left in a crowded state, of the roots bulbing on the surface of the ground instead of being well covered with soil, which forms a great protection during the winter. Free thinning and frequent hoeing while the ground is in a dry state will help this crop very much. Hoeing should follow directly after the crop has been thinned, as this fills up the crevices in the soil and keeps the permanent roots firm.

**WINTER SPINACH.**—This crop should be treated in a similar way to allow each plant to stand just clear of its neighbour, so that the leaves may become strong and of good colour. When the plants remain in a crowded state the lower leaves turn yellow and they soon decay, especially after a fall of snow. It is not uncommon for this crop to become patchy, but the gaps may be filled up by transplanting, so long as the plants are lifted carefully while young and a nice portion of soil retained round the roots. A dull, showery day should be selected for doing the work, as the plants not only lift better, but there is less danger of them flagging. Young plantations should have one or two dressings of lime, soot, or fine ashes toward of the attacks of slugs, which are very fatal to the young foliage.

**CAULIFLOWERS.**—With the new early varieties which are now raised in heat in February autumn-raised plants are in many gardens dispensed with, but they still prove very acceptable as forming a succession. Walcheren is still about the best, and a sowing made now should furnish a nice batch of plants, which should be wintered under handlights or in cold frames. In cold, wet districts sow the seed in boxes, or it may fail to germinate and much time would be lost. Seed that is sown in the open should be coated with red lead, as it preserves it in wet soil, and also protects it from birds and slugs. Mould up late batches of Savoys, Broccoli, &c., as this is a protection against wind and frost. In very exposed positions it is a good plan to heel the plants over, covering most of the stem with soil, and by doing the work at once they become established again before hard weather sets in.

**CABBAGE.**—The planting of these will now be general, and the desired number should be got in with all speed. I have recently seen large breadths in a cold northern district, and I noticed such kinds as Ellam's Early were planted 1 foot apart each way. The planter found that by putting them close together they suffered less from the searching winds experienced in that district, and it is also a great saving of space.

**RADISHES.**—Make a sowing of these in shallow frames, as sowings made outside seldom prove successful after this unless it be in very favoured and warm gardens. Remove the lights on all favourable occasions, but replace them at night when heavy rains are expected. A sowing should also be made in a frame of Early Nantes or French Short Horn Carrots, the small tender roots being preferred to the longer ones for many purposes. Keep the seed bed well up to the glass and use rich sandy soil. Thin the seedlings out early, affording a good watering afterwards with tepid water. RICHARD PARKER.

### FRUIT HOUSES.

**MELONS.**—Plants set out during the past few weeks have had bad weather to contend with, but they have made good progress and will soon be ready for stopping. The plants being robust, will then produce plenty of fruit-bearing laterals, but as no one thinks of waiting to secure a heavy crop of fruit at this late season, it is always advisable to set the first pair of female blossoms which open together and swell them off quickly. As soon as this is discernible, rub out all the other shows and reduce lateral growth to safe limits, so that the whole energies of the plants will be confined to maintaining a fair amount of foliage in good health, and in the production of two fruits only. The plants should be urged forward by the application of a continuous and steady bottom heat of 85°, and fire-heat must also be requisitioned during the day, also when the weather is dull and cool; in fact, after this time of the year it can but seldom be dispensed with. Give every attention to watering, and although water in a cold state should never be applied to the roots of Melons, the fact that it should always be of the same temperature as that of the house cannot be too strongly emphasised now. Be careful not to wet the stems and the soil just immediately surrounding them, and syringe but once a day, and that only when bright and directly after closing for the day. Keep the roots active by giving them a little fresh compost to root into once a week, and warm it before laying it over the roots. As the autumn advances and nights get colder, it is a good plan to cover the roofs if there is any difficulty in maintaining a proper degree of heat, and this may be done at dusk. Plants on which the crops of fruit are in a more forward condition will need every attention if they have to be ready for cutting early in October. The utmost use should be made of sun-heat to advance the temperature during the forenoon, and early closing should be practised, varying the time according to locality. This, with the aid of fire-heat during the afternoon and night, will induce the fruits to swell rapidly, provided judicious applications of water and

mild stimulants are given whenever the condition of the soil about the roots demands it. Water, it need hardly be mentioned, is not required so often or in such large quantities as during the summer months, when moisture is evaporated so much more rapidly, and it is better to err in the direction of giving too little than too much when autumn sets in. Keeping the soil in a condition approaching saturation at this time of year is a fruitful source of canker, while it also causes full-grown fruits to split. The same care should be exercised with regard to syringing as mentioned above, and as the fruits approach maturity, dispense with it altogether. Should canker show itself either on the stems or any other part of the plants, immediately apply quicklime or powdered charcoal, and follow up these remedies until the moisture exuding from the diseased parts is dried up. Houses in which fruits are now ripening or are about to do so must have a free circulation of warm, dry air to ensure good finish and high flavour. Therefore as soon as colouring commences cease damping and syringing, and gradually withhold water at the roots. Maintain a dry atmosphere with the aid of fire-heat, keep up the bottom-heat until the last fruit is cut, while a little air at the top will materially assist in improving the flavour, and this may be kept on both day and night.

**FRAME MELONS.**—With a few exceptions these will be over for this season, and in those few instances the greatest care will be necessary to ripen up the fruits where linings alone are depended on for supplying warmth. No more water should be given at the roots than is absolutely necessary to keep the plants growing and the fruits swelling, and entirely dispense with syringing and damping. Little or no ventilation will be required except to change and sweeten the internal atmosphere until the fruits change colour, when a little will be needed during the day. If the temperature falls to a low point, mat the frames over nightly.

**CUCUMBERS.**—The young plants for winter work should at once be planted, if not already done, so that they may become established before autumn gets too far advanced. Like Melons, these will require plenty of heat to keep them in active growth, and damping and syringing must be made use of in a judicious manner. As canker is not to be feared, and no modification of treatment is necessary as regards the fruit when ready for use, a moister atmosphere may be maintained, but it should be varied according to climatic conditions. For instance, on dull days a damping of the floors and perhaps the surface of the beds will be ample, while on bright mornings damping may be freely done, and at closing time the foliage and beds may be thoroughly syringed with tepid water. The vapour troughs should be kept constantly filled and a steady bottom-heat maintained. Attend to stopping and training and get the trellis well covered with growth before allowing the plants to bear. Give the roots a little fresh compost every week, which will keep them in an active condition, and lead to young growths being freely produced. This compost should consist of fibrous loam torn into pieces about 2 inches square, a little charcoal broken up to the size of Walnuts, and a little bone-meal. Always apply it in a warm state. When stimulants are required nothing can equal real Peruvian guano for the winter-time, and enough may be used when necessary to just colour the water. Summer fruiting plants showing signs of exhaustion may be brought back into health again if a part of them is entirely relieved of fruits and rested for a few weeks, or if there are two houses of such plants, the one may be rested for a time, while the other is made to do extra duty by keeping up the supply, and rested in turn afterwards. In addition to cutting off the fruits, remove all the oldest leaves and thin out the most exhausted portions of the bine. Keep the house and the roots moderately dry for a few days, and where the plants show signs of breaking afresh, syringe them and water the roots with tepid water. Then remove any loose soil there may be over the roots,

and give a top-dressing of the above-mentioned compost with a little soot added. If the roots are healthy this will speedily have the effect of inducing the plants to make an abundance of new growths, with which the trellis should be covered before being allowed to bear again, and it will set them up for the winter. If these plants have been badly infested with red spider or thrips, syringe them once or twice with an insecticide after trimming them up. Autumn fruiting plants must have attention in the way of training in the young growths and stopping the same at two leaves beyond the fruits, but avoid both overcrowding and overcropping.

FRAME CUCUMBERS will soon be drawing to a close in the case of unheated frames and pits, and even where heated they are a source of trouble during such weather as that lately experienced, as they cannot be properly attended to. However, where it is necessary to keep them going as long as possible, in the absence of a Cucumber house proper, the linings should be frequently renovated to prevent the heat from declining in the first case, and the precaution taken to mat the frames over at night. In both cases give proper attention to stopping and keeping the bine thin and evenly distributed over the beds, and remove all fruits as soon as they are large enough for use. Discontinue damping and syringing and use but little water at the roots, though at the same time do not allow the soil to become so dry as to cause the leaves to flag. Air the frames and pits daily if possible to liberate moisture, otherwise mildew will attack the foliage, and the fruits, instead of growing to a useful size, will mould at the points and become useless.

A. W.

### THE GREAT DROUGHT OF 1896.\*

If the great frost of 1895 was the most notable feature of the year, certainly the great drought was the most notable feature of 1896, yet neither the frost of the one, nor the drought of the other, stood alone in the two years; they were preceded and followed by other conditions equally noteworthy, and it is the story of these conditions which will be the subject of my paper.

The twelve months that have past between December 1, 1895, and December 1, 1896, divide themselves into three well-marked periods; a very mild winter, a very dry spring and summer, and a very wet and cold autumn. It may be convenient to say something of each of these separately. The

#### MILD WINTER

comes first, and how very mild it was can be seen at once by this short record. Leaving out the previous Decembers, because they were almost alike, with seven days of slight frost in the one year, against six days of slight frost in the other, and confining ourselves to the three months of January, February and March, we find that there were in those three months of this year, twenty days in which the thermometer fell below 32°; in the same months of 1895 there were fifty-five such days; and this was not all; the frosts of 1895 were unusually severe, the frosts of 1896 were very slight. The thermometer in 1896 was seldom below 30°, and the lowest reading was 26° on February 3. The thermometer in 1895 was often below 20°, and was as low as 10° on February 8; and to put the matter shortly, the winter of 1895 was one of the coldest, and the winter of 1896 one of the mildest on record. Now, what were the results of this mild winter? They were very marked, and in some respects very unexpected. The most obvious result was that plants which had

been weakened by the cold weather of 1895, but not killed, and which had made a struggle for life during the summer and autumn of the year were largely helped in the struggle by the mild winter, and were able in spring to come on with their usual vigour. That was a real gain; and another gain was that many plants which were apparently quite killed by the winter, and put in no appearance at all during 1895, came up well in 1896, and so taught us a lesson of the extreme vitality of all vegetable life, and a lesson not to despair or be in too great a hurry to root up all that have been injured, but to be hopeful and patient. Among the plants that so reappeared in 1896, after having disappeared in 1895, I may mention these: the sweet-scented Verbena (Aloysia), Vitis striata, Allium giganteum, Bulbine annua, Hypericum coris, Behmeria nivea (the Himalayan Nettle), the Japanese Yam (Dioscorea Batatas), the Indigo (Indigofera Dosa), Azara microphylla and others. The mild winter also brought a very early flowering, especially of flowering shrubs, which was partly the cause of many shrubs flowering twice; this is a doubtful benefit, but a more certain one was that the plants were able to make good and healthy growth, which have had full time to mature, and so are better fitted to face the winter. On the other hand there was one result of the winter which was rather unexpected, and that was that some plants which were uninjured during the severe weather of 1895, were much injured, and in some cases killed during the mild winter of 1896. At first this was a surprise, but a very little thought soon gave the reason: the plants were not killed or injured by the mild winter, but by the severe weather of the previous October and November. You may remember that we had a great wave of heat in the latter part of September and the beginning of October, followed by an unusual wave of cold in the end of October and beginning of November; and it was these two combined that brought injury to many plants. The warm wave had unduly stimulated the plants in many cases into new growth, and in many more by arresting the natural decay or change that plants go through in the late autumn. Herbaceous plants prepare themselves for winter by gradually dying down, and preserving their life by underground life only; if the frost comes too soon, much of the nourishment which would have been carried down to support the underground life during the winter is lost, and the plant is so much the weaker, and so much the less able to resist cold. With shrubs the case is of course different, but the result is the same. In the normal state the leaves fall, leaving the buds for next year fairly protected by their own well-ripened coverings, "the plant has time to become a chrysalis slowly, in preparation for the winter" (Kerner), and the sap, or what botanists call "the water of imbibition," is gradually withdrawn to the roots, to remain there till it is wanted for the new life in the spring, and so the branches are said to be "ripened;" but if there comes an early frost, while the plant is still growing and full of life, the buds are injured, and, if not killed, they fail to produce flowers, and the sappy branches are easily frozen, and either die altogether, or are rendered quite useless for the next year's growth. I entirely put it down to the early frost of last October and November that my Japanese Persimmon (Diospyros Kaki), which had been quite uninjured by many previous winters, was cut to the ground last winter. Fatsia japonica also was more injured than I ever knew it before; my Palm had no flowers, the first time for six years past; Halesia hispida, though a very healthy tree and always

a free flowerer, had no flowers this year; and so with other plants. Before leaving the subject of the mildness of the winter, I should like to call your attention to one thing connected with it. You may remember that two years ago I quoted to you an observation of Sir Robert Christison, that when frost occurred on the last week of October or the first ten days of November, it was always followed by a mild open winter; this was certainly the case this last winter to a very remarkable degree, and I mention it again because I have been looking into the forecasts of other observers to see how far the same thing had been noted by others. Sir R. Christison was a thoroughly scientific man, a man who was content to make accurate observations and to record them; but not man to say that because A followed B, therefore A was caused by B. This was, and is still, the error of most weather prophets. They note in some years that a warm January has followed a cold October, and they prophesy for all time that a cold October is sure to bring a warm January; they argue from the particular to the universal, which is absurd. The error shows itself in the common belief that abundance of Holly berries is a sign of a hard winter to come. They are a proof that the previous seasons have been favourable to the formation of Holly flowers and berries, but they can tell us nothing of the weather to come. Yet though a mild winter is not a consequence of a previous cold October and November, it is a coincidence which may be well worth noting, and it is curious how universal has been the forecast of a mild winter from a cold beginning. The turning point in the weather of November has been from time immemorial fixed to St. Andrew's Day and St. Martin's Day, November 3rd and 11th; and no doubt that has arisen from the observation that fine warm weather so often comes, though for a very short time, at that time, making the "All Halloween" summer and the "St. Martin's summer, halcyon days," that Shakespeare notes. There are several of proverbs grounded upon this common observation, but I need only mention one or two.

"If there is ice in November that will be a duck, there'll be nothing after but sludge and muck."

"If it's fair, dry, and cold at Martinmas, th cold in winter will not last long."

"If the geese on St. Martin's Day stand on ice, they will walk in mud at Christmas."

There are many such proverbs used in many European countries; and without attaching much importance to them as universal rules, they are worth attending to and testing because they are the result of many years observations both of scientific and unscientific men; and looking again at Sir R. Christison's remark, limiting the time to be noted to the last week in October and the first of November, it is curious to notice how almost all weather prophets profess to attach great importance to such weeks. I have spoken at some length about the autumnal cold, followed by a mild winter, not only because last winter was such a marked example of it, but also because we have been passing through a cold Halloween and Martinmas of more than usual length, and it may be interesting to note whether the same result will follow this year, but I am afraid we must at present content ourselves with hoping only. But before I quite leave that part of my subject I must ask you not to suppose for a moment that I consider the mild winter of 1896 as the result of, or in any way caused by, the severe cold of November, 1895. The weather of any month we may be passing through is not caused by the weather of any preceding month

\* Paper read by Rev. Canon Ellacombe, M.A., before the members of the Bath Natural History and Antiquarian Field Club, December 9, 1896.

can it have any effect on the weather of any month to follow. The weather of each month is used by atmospheric and climatic conditions which may have existed hundreds of miles away. And, perhaps, many weeks or months that may have long passed; and it is only when the conditions draw near our globe, and our portion of the globe, that we are able to make a poor rather forecast of four and twenty hours, a forecast which, as we all know, is often far from the reality.

I have said quite enough about the mild winter, and it is time to come to the other marked feature of the year,

#### THE GREAT DROUGHT.

During January and February the rainfall was above the average, but during March it was below the average; and then from the first of April to the end of July the total rainfall was only 3½ inches, of which more than half fell on few days in June. Since that time we have had enough rain, especially in September and the first half of October, to bring the total rainfall of the year almost up to the average. We may say that for four months there was no rain; and what was the result in our gardens? We may put out of the question all the newly-planted shrubs and other plants; of course they would suffer more or less in such a drought and they needed for a good deal of labour and watering. At the point that most forcibly struck me was at with well-established plants the injury was very small indeed. My own garden has a rich deep soil, and so is able to contend against a long drought better, perhaps, than some others; and during the summer I visited many other gardens, and everywhere I met with the same surprise at the little amount of suffering that the plants had to bear, and I had not much difficulty in finding the explanation of this, which is so interesting that I must speak of it in some little length. The first factor in the inquiry is, I think, the good rainfall of March, by which the ground, which was by no means dry before March, got an ample supply; and owing to the mild weather the plants were sufficiently forward at once to take advantage of the supply. Now, you are probably all aware that water is of no use whatever to plants except at the roots, and plant life is full of all sorts of devices to gather in a good supply of water to the roots and to keep it there. Almost all the water that comes to the leaves of plants finds its way down to the roots by gravitation chiefly, but in no case through the leaves or the stems. The skin of the leaves of plants, and the rind or bark of their stems, are almost like the human skin, able to exude moisture, but in very few instances—some botanists say in none—can they imbibe water. Their function is to give out water, and there are many instances in which the water that has been drawn up from the roots is given out so largely by the leaves that it flows down again from the leaves to the roots, not, of course, the same way it came, but through the air, almost like rain. Familiar instances of this are found in our common Peazle and in the Alchemillas; but as the subject is not perhaps familiar to you all, and is very closely connected with the provisions made in Nature to provide against drought, I will venture to give you two or three well-marked examples. One of the best examples of the extreme provisions made to prevent access of water to the leaves or stems of plants it is to be found in the Bamboos; and any of you who know the common hardy Bamboos can test it. Not only is there a general provision of rings or hairs on the stems, which effectually prevent any lodgment of water that may come

from rain by throwing it off, but the leaves are so made that every provision is made to prevent the entrance of water and to facilitate its fall from the leaves to the roots. If you will take a leaf from the Bamboo and plunge it into water and hold it there, you will find on drawing it out, that the underside of the leaf is absolutely dry. Now Bamboos are great pumps; they consume much water, but instances are found where they absolutely weep and keep the ground beneath them quite moist. M. Carrière has noted this in Algiers, and in Gregory's account of the Great Rift Valley in Tropical Africa he tells of some thickets of gigantic Bamboos, whose "upper foliage interlocks into an impenetrable thatch, which is always sodden with moisture," and amongst them would grow nothing, "except Mosses, but in places the soil was covered with Iceland Moss (*Selaginella*) and the Maiden-hair Fern," and "a mist hung over the Bamboos and kept the vegetation sodden with moisture, and made the soil as saturated as a sponge."—"Great Rift Valley"—1—290. That is one way in which "the wilderness is made into a standing water and water-springs in a dry ground," and is an instance of the way in which thirsty plants can supply themselves with water in a dry, tropical country. I will give you another example from a very different climate. In the Death Valley of California the rainfall does not exceed 5 inches in the year, yet the district has really an abundant vegetation, chiefly, however, of low trees and shrubs, with Cacti and Yuccas. The problem is how this 5 inches can be made to answer for the support of the vegetation, and the problem is thus solved by Nature. The trees and shrubs are low and far spreading, and so the evaporation from the earth is reduced as much as possible; the roots spread to enormous distances, and so are able to suck up every particle of moisture; and the transpiration is reduced to a minimum partly by some leaves not transpiring at all, partly by the leaves being clothed with a thick, and in many cases a woolly epidermis, and partly by the leaves falling very early, and so stopping at once the leaf transpiration. This is a most curious example of the way in which difficulties are met in plant life; but really, we have in our own gardens many instances as curious, which were especially notable this year. There are many plants which we may fairly call Resurrection plants; plants which apparently die during a drought, but which come to life again at the first approach of rain. A very familiar instance is found in the pretty Fern that is so abundant in many parts of this district, though very rare in many parts of England—the *Ceterach officinarum*. As soon as the dry weather comes, and sometimes almost before it comes, the leaves shrivel up, showing only the under part of the fronds, and looking like so many shreds of brown paper; but on the first approach of rain the fronds go back into their proper position, they regain their full colour, and carry on their life as if they had had no check. To those of you who grow alpines, the pretty *Ramondia pyrenaica* will be almost as familiar, and in that, too, you will see the same power of resisting a long drought. After a week's drought the leaves will be shrivelled and brown and almost reduced to nothing; it will remain in that state for weeks, and then when the rain comes the leaves regain their colour and the plant is as happy as ever. In these two plants there is a mystery which I cannot explain. I can understand a plant losing its leaves by drought and then getting new leaves, but I cannot understand how leaves can lose all their colour and then regain it, as these two plants and many others are able to do, and

it seems as if plants had the power on the approach of danger to part with their chlorophyll not entirely, but to store it in a safe place, their roots, from whence they could draw it again when the circumstances were favourable. But there is another still more common instance, which I do not mention with these two, because I am not sure whether or not the result is produced in the same way. Many of you must have been distressed at the state of your lawns this year. My own having a deep soil stood the drought well for a few weeks, but the battle was too long, and at last it was almost the same colour as my gravel walks; yet before we had a week of rain it was a brilliant green, as green as the freshest growth of spring. I do not class this with the other Resurrection plants, because I think it likely that the fresh green arose from young leaves freshly grown, and not from the old leaves recovering their colour. But it was really marvellous how soon everything responded to the rain; the lawn was perhaps the most conspicuous example, but it extended in a very pleasant way to our fruits. I had a good crop of Peaches on the wall and a good crop of Apples, but both Peaches and Apples were very small, and the Peaches at first were dry and flavourless; but as soon as the rain came both Peaches and Apples became visibly and very rapidly plumper, and I had no cause to complain of their size or flavour. And, indeed, smallness, either of fruit or leaves, is one of the many provisions that Nature uses to prevent the bad effects of drought; and you will have noticed many such cases this year. With me the Willow-leaved Gentian (*G. asclepiadea*) grows very well, and is often more than a yard high; this year it was about half that size, and that meant about half the usual quantity of leaves, and that, again, meant that the plant had only to part with one-half the amount of moisture that it does part with when in full leaf. That shows why in a wet summer there is always an abundance of foliage; a greater quantity of leaves is required to carry off the moisture that the plant sucks up by its roots, and leaves are provided accordingly. The conclusion, then, at which I have arrived is very shortly this: that there was never a complete failure of moisture at the roots during the long drought, and that, in one way and another, Nature economised the store, and so the plants were saved. I might say more on the drought, but I must leave myself room to say something on

#### SOME OTHER ASPECTS OF THE YEAR.

I think the drought has confirmed what I said last year as to the value of rich suitable soil to enable plants to stand against frost. That statement was objected to by some of my friends, though I gave it on the high authority of Humboldt; but I am sure it is right, and this year's experience has taught me that plants cannot stand against either drought or frost unless they are strong and healthy, and that a good rich soil is the best way to make them so. I think my own garden is to some extent a proof of this; with its deep alluvial soil it gives many plants all that they ask for, but I saw it more fully proved in another, and far grander garden. I went in October with your vice-president to Abbotsbury, in Dorsetshire. Though I had often heard of the beauty of the garden, I had never seen it, and when I did see it I could scarcely believe my eyes. There were trees and shrubs, and other plants from Australia, New Zealand, the Cape, Mexico, Brazil, and other parts, not merely living, but flourishing as if they were in their native countries. Then came the puzzling question,

how do these plants grow at Abbotsbury with a luxuriance that is almost unknown north of the Riviera? The garden is near the sea, facing the south, with the low hills of the Chalk Downs behind sheltering it from the north, and is well sheltered by walls, fences, and other artificial protections; but this will not explain it. There are hundreds of places round our coasts as well situated for aspect and protection, but with no such gardens; and I have been driven to the conclusion that the secret must lie to some, perhaps to a great, extent, in the soil. As we walked to the garden from the village we passed a small roadside cutting, showing a section, which at once attracted the attention of my geological companion. It was a ferruginous oolitic brash, and I should have considered it as bad a material for a garden as could be found; yet the Abbotsbury garden is almost entirely on this. There is no doubt that iron in the soil is a great help to many plants; gardeners like it for their Hydrangeas, and in my own neighbourhood I have a good example of its value. I have never succeeded in growing the beautiful *Tropaeolum speciosum*, which in many parts, especially in the north, grows like a weed. I know of one place where it is even a troublesome weed; but I do not know of it growing well anywhere in this district, except at Iron Acton, where the soil is strongly charged with iron. Yet, I do not say that good soil by itself will enable plants to resist drought; it can only be a great help, and on whatever soil plants are growing, a long drought will test the skill of the gardener. Perhaps the skill, or no-skill of a gardener is shown in nothing more than in his way of watering his plants. Plants soon show when they are thirsty, and a good gardener will at once quench their thirst by a plentiful supply of water at the roots; the unskillful gardener loves to water the drooping foliage; it looks pretty and is of no use; and if he has a plant drooping by the side of a gravel path, he is rather surprised to be told that he had better soak the gravel path well than wet the foliage only. There is an advantage in watering leaves when they are choked with impurities, and in some places, as at Kew, where they have to contend with an atmosphere charged with blacks, constant and copious syringing is useful; but this is cleansing, and not watering, and is the same use to the plant that a good washing is to a dirty man, opening the pores by cleansing them of their choking impurities. Very shortly I will mention two other features of the garden this year. I attach a high value to the autumnal tints as one of the chief ornaments of the garden, and this year I had none. We are now told that it is wrong to speak of equinoctial gales, but this year we had very strong gales at the time of the autumnal equinox, with the unpleasant result that the trees were stripped bare long before their time, and so there were no leaves to be tinted. The only compensation that can be had for this loss is in the old weather forecast that if the leaves fall before Martinmas the winter will be mild. I hope this forecast may come true.

The year was not so remarkable for abundance of unusual fruits and seeds as I should have expected. The Catalpa, some Magnolias, and the *Koelerteria* fruited well, and I had fruit on *Enothera macrocarpa*\* and berries on *Solanum crispum* which I never saw before, but I did not notice many others out of the

\* The fruit of *Enothera macrocarpa* is most curious. From a central line spring four wings each about an inch wide, each wing being the pod containing the seeds. The length of the fruit is from 3 inches to 5 inches.

common; but the Hollies and the Hawthorns are beautifully set with berries, and the berries on the Privets were, this year, quite remarkable from their number and the intense depth of the black colour. I think, however, that the mild winter, dry summer, and wet autumn of this year will have a marked influence on the vegetation of next year. Fruit trees of all sorts are well set with fruit-buds; the spring-flowering shrubs, such as the Magnolias and *Calycanthus*, are full of promising flower-buds, and though all November was cold and had an unusual amount of frost, plants, even tender plants, seem to have been very little affected by it, which shows that they have made strong and healthy growth, and are well prepared for the cold when, and if, it comes. The animal life of the year requires a short notice. I do not know whether the mild winter was in any way the cause, but I think that the number of

time, and I believe it was a good honey year but there was a sad lack of moths and butterfly flies. I always consider that one of the most beautiful things in the garden in autumn is the swarm of peacock butterflies on the Michaelmas Daisies; this year there were scarcely any.

In my last paper, and in this, I have tried to show you what I feel myself that frost and drought are not the dreadful visitations that heartless gardeners make them out to be. More than that, I am sure, that though unpleasant while they last, they have their use and are as necessary as mild winters and plentiful fruitful rain in its season. We may, in fact feel quite sure that they are absolutely necessary; and though we may not understand how it should be so, they do fill their proper allotted parts in the grand scheme under which we live the scheme that has for its great object the well-being of all organic life.



A group of white Phloxes.

our immigrant birds was much below the average. I noticed this especially with the swallows and redstarts. Of redstarts we had very few, though we generally have them in abundance; we had a great many swifts, but the swallows are certainly few in number and arrived very late. I did not see one in my garden till the last week in April. But this may have been a purely local occurrence, for the number of swallows in the autumn was as large as usual. Of course, there are always more in autumn from the accession of young birds, but the great addition must have been from the southward rush, which always swells the numbers in our southern counties, and the full number that we had in the autumn probably shows that in other parts the number was not below the average. Wasps were rather plentiful for a short time, but it was a very short

is also directed, they are scarcely so well suited as when packed after being cut many of the flowers fall. For home decoration these Phloxes are invaluable, either in beds or for furnishing bold spikes of flowers as occasion require. Years ago, however, these Phloxes were exhibited each summer by the late Mr. Robert Parker, and cut with long stems, *i.e.*, about 2 feet long, and about three trusses of each variety; the display was very imposing. In Mr. Parker's case, however, little packing was needed, and the large handsome panicles of bloom suffered but little. The system adopted was very simple, though effectual, and was as follows: Some 6-inch or 7-inch pots were rendered watertight and afterwards nearly filled with quite wet silver sand. Three large spikes with all the lateral branches intact were thrust into the sand, the latter gently watered

## FLOWERS OF THE GARDEN.

### HERBACEOUS PHLOXES

THERE is a great deal of truth in the remarks of "A. D." at p. 1 concerning the neglect attending Phloxes. In the majority of instances even where the highly decorative border flowers are found at all, they are to be seen very much in the background, scrambling for an existence with a forest of young sucker growth from such things as Lilacs and other things that have for years run wild. Another place equally unfitted to the well-being of these showy subjects is the neighbourhood of trees that both by root and branch tend to rob the ground of the very moisture the Phlox need when in the season of growth. I have repeatedly seen them in both positions in several of the London parks and gardens. Even supposing it were impossible to set aside a few beds on the grass for these plants where they may receive special treatment, it would still be an easy matter to arrange a series of large groups in the border at intervals, either in a mixture of the best kinds or these latter employed separately. In either case they would surely prove interesting and attractive. To show flowers, to which attention

and all was ready for placing in a light spring run. In this way the exhibits were conveyed to their destination, where they invariably arrived little or no worse. In much the same way did Mr. Parker exhibit a large number of early things flowering in the autumn, and generally most successful. Flower-pots, too, of the sizes named are infinitely superior to the small, narrow-necked bottles so much in vogue to-day and so ill-suited to a good representative bunch of many good hardy flowers. Such pots are easily made watertight with a plug of cement in the hole at bottom. It was in this simple manner, by the utter exclusion of wooden boxes for packing everything for exhibition, that Mr. Parker reserved so much freshness in his exhibits of autumn flowers. Seen in this way there is no need for either Fern or Asparagus to assist the display, for the foliage of the Phlox, when properly grown, is abundant for all purposes. Such exhibits of Phloxes were made each year and attracted a good deal of attention, and, moreover, by the general system of culture as then obtained good trusses were always forthcoming. I cannot agree with "A. D." that "No plant could be allowed to stand untouched more than two years from the cutting"; for to pull up a plant to pieces at this time of the year is virtually to destroy the plant at the very time it has become established and capable of creating a show. Furthermore, I have cut some of the best heads of these Phloxes from plants twice the age, and the advice to frequently pull such plants to pieces is often attended with very poor results. Possibly "A. D." will explain the need for such frequent renewal. Provided a start made now with a fresh young plant, preferably from the open ground with single stem, that next year hence will produce three or four moderate heads of bloom. A year later the same plant will easily carry twelve much better heads, and in the third flowering the same plant will produce fully double the number, and very large and handsome into the bargain. This is not an imaginary ideal, for it may be accomplished by any good gardener who will take a little ordinary care in preparing and enriching the soil, early discarding the growths not required, providing an open position, and so arranging that the beds containing them may be deluged once a week at least with liquid manure and once with water. It was no unusual occurrence with Mr. Parker to exhibit fine heads of Phloxes from stools that must have been five or six years old; but then the Tooting Phloxes were in close proximity to some huge tanks of water, and of this they had their fill. On the other hand, there may be those who cannot command such a supply as the above, or even the quality. These must compensate as much as possible with rich as well as deep soil, mulchings equally rich, and occasional soakings with moisture. In all these respects it is possible to err, and when the gardener will advise these facts, and act up to them, the herculean Phlox may be made one of the finest ornaments of the garden.

The heights given at page 189, if accepted as they stand, will prove misleading, because no Phlox, whether a spring cutting of this year or a divided plant of the previous autumn, can possibly attain maturity in a single season. I have here a bed of a splendid white kind, planted six years ago, and this season scores of inches have been taken from it, and, in spite of age and heat and drought, the plants have reached about 4 feet high and carried beautiful foliage to the soil. Cuttings of the same kind in their first year are rarely more than 20 inches or 2 feet high; the year following the same plants will be 3 feet, and just so those men-

tioned at page 189. All will increase in height with age. The variety which in a season reaches 20 inches to 30 inches will attain fully 5 feet in its third or fourth year, and, if "intelligently grown," produce very handsome heads of flowers, that would put to shame many of the scraps shown at the Drill Hall. It is want of culture and the non-attendance to small details of annual mulching and early thinning of shoots that cause these plants to look unsightly. If some hardy-plant specialist during the present month were to plant two or three dozen in as many oak tubs (paraffin casks cut in two are best), and make a feature of the same, these plants could be exhibited in the year 1899, with an average of a dozen trusses each, that may cause a sensation to be remembered; and while this can be accomplished in such a time, why need the hardy-plant nurseryman be content with bringing poor, often very wretched examples of such a beautiful class of hardy flowers? Such examples would require neither Asparagus nor Fern to show them off, and I only regret my limited space prevents me taking the thing earnestly in hand. There is no better time than September for planting Phloxes, a fact that renders the subject quite opportune at the moment. E. JENKINS.

Hampton Hill.

**Lilium Henryi.**—This is often referred to as an orange-coloured *L. speciosum*, but, apart from any other consideration, the bulbs are very widely removed therefrom, as those of *L. Henryi* are far more like those of the Burmese *L. nepalense* and *L. sulphureum* than they are those of *L. speciosum*. Again, while the individual blooms are quite of the *speciosum* stamp, the general aspect of the plant reminds one of *L. tigrinum*.—H. P.

**Montbretias.**—These charming flowers are gradually working their way into public favour and being estimated at their true value, so I think it is worth noting that they are capital "shade" plants, and although the growth under such circumstances is not quite so strong, the flowers are produced with equal freedom, and, as they are later, the season is naturally prolonged. I planted a batch early last autumn in a portion of a hardy Azalea bed, over which there is a dense growth of Deodar Cedar, and have been very pleased to note the satisfactory results. Are the newer varieties of *crocosmiiflora* as vigorous as the type? Spikes of the latter from strong corms replanted last autumn are now 3½ feet in height.—E. BURRELL.

**Lilium speciosum.**—The different varieties of this fine species are among the best late-flowering Lilies for planting outside in exposed gardens and other places, where they have to take care of themselves to a certain extent. Two years ago I planted some scores of bulbs of it in variety with no special preparation of the soil, just a little light compost being placed around the bulbs, as the soil is heavy and at this time of year very retentive of moisture. In every case these are now fine clumps, many of them sending up four and five spikes, while the bulbs of *L. auratum* have almost vanished. No doubt the latter fine Lily requires special and careful preparation of the soil. As a really hardy plant to take its chance with the other occupants of the herbaceous border it is a failure. Among varieties, the pure white *Kratzeri* is one of the best, and there are one or two other fine white forms more or less distinct. *Melpomene* is one of the very best dark forms and a distinct advance on the better-known *L. speciosum roseum*.—H. R.

**Begonias outdoors.**—After a careful inspection of the splendid show of outdoor Begonias at Cowdray, I came to the conclusion that where the same amount of skill and attention can be bestowed they rank unmistakably among the best of summer flowers, and the result is obtained in this case mainly from seedling plants and home-

saved seed. Although Mr. Geeson has long been known as the raiser of doubles of all shades, some remarkable for their size and others for their perfect shape, it is only very recently that he has been able to unite to the perfection in shape a strong flower stem and a stiff neck, that keep the flower erect. Naturally, size of flower has to be sacrificed to a certain extent, but this is certainly no loss, for, given a fair-sized flower, holding itself well erect, quite first-class in shape and of pleasing colour, one has, I fancy, the *beau idéal* of an outdoor Begonia. I came upon a batch of some 2000 seedlings just after a heavy storm, and the flowers looked none the worse for the deluge they had experienced. They were in all shades, from white, primrose, yellow, through pink and scarlet, to deep crimson, and the habit was nearly as varied, some making large bushes and others having a smooth leaf and a close, compact habit that reminded one of some of the Saxifrages. In the flower garden many beds were filled with types that had been selected from previous years' seedlings, planted thinly on carpets of *Mesembryanthemum* or *Veronica incana*, or mixed with *Dactylis glomerata*. The fact that all this grand show of doubles was the result of home-saved seed made the display all the more worthy of notice, as any gardener can testify who has made the saving of seed from these flowers a speciality. I noticed a strain of double white that was both very free and vigorous, just the sort of plant to be put out thinly on a carpet of dwarf *Ageratum*.—E. BURRELL.

#### BORDER CARNATIONS.

In Mr. Woodall's very interesting paper on this subject in your issue of September 4 there is little to which exception can be taken from his point of view, gained by the experience of his lovely garden at Scarborough. Here, however, matters are somewhat different; all my Carnations have been out of bloom for three weeks at least, but though they do not continue so late in bloom, they begin earlier. Your correspondent says "that no flower has been so killed by kindness." This, I hope, I may be permitted to dispute. Does he mean to say that the list of beautiful varieties, the names of which he gives, is not a great improvement on those grown a dozen years ago? The efforts of Mr. Martin R. Smith have, I maintain, greatly improved the standard of these lovely flowers, and buying, as I always do, most of the new varieties as they come out, I have never as yet found any of them "dearly bought novelties"—those at least that have emanated from that quarter. I do not propose to argue the advisability or otherwise of having a proper standard or what a good Carnation should be. I presume there is some good reason for the fact that a smooth flat petal is considered desirable, that a clear white or yellow ground should be a *sine qua non* in the matter of Picotees, and that the stem should as far as practicable be strong enough to support the bloom and not flop about all over the place. From the purchaser's point of view, it may be a good plan to leave his plants for three years in the same place, but I maintain that he will not have such good blooms on his two or three-year-old plants as he would on those that are layered annually.

Now as to varieties. Mrs. Gifford is the only one that I do not know and have not grown in large quantities. The statement that Mrs. Sydenham (Mrs. Robt. Sydenham) "is quite worthless as a border plant" is, according to my experience, quite incorrect. I have had this plant growing in my garden from the first, when Mr. Sydenham purchased the original stock from Mr. Douglas (the raiser), and of all the Picotees or Carnations I have grown, I never found any variety grow so strongly or flower more freely in the open border. It is annually greatly admired by visitors who come to see my Carnations when in bloom. Your correspondent says neither *Corunna* nor Miss Audrey Campbell are "improvements in any way." As far as *Corunna* is concerned, I admit I am somewhat of his opinion,

but Miss Audrey Campbell is a totally distinct variety, a splendid border Carnation, and one that will please amateurs. That it pleases professionals as well is proved by the great use that was made of it both at the National Carnation and Picotee Society's show at the Botanic Gardens in July last and at the Midland show in August at Birmingham. As to fanciers, I should take up too much of your space if I were to go into this question; but there is one which I am rather surprised your correspondent did not mention, and that is President Carnot (Douglas). Of this flower I am particularly fond; if he has not got it I should advise him to get it.

H. W. WEGUELIN.

*St. Mary Church, Torquay.*

#### THE CULTURE OF CALOCHORTI.

I SHOULD like to add a few remarks to Mr. Purdy's very interesting letter in a recent issue on the above subject, especially in reference to the disease or mildew which he mentions as attacking certain species. It generally makes its appearance with me in *C. Nuttalli* just when this species is about to open its flowers, and speedily wrecks the plant, so that I only save about 10 per cent. of the flowers.

It has been confined with me entirely to the desert species, *C. Nuttalli*, *C. Palmeri*, *C. flexuosus*, *C. macrocarpus*, and *C. Kennedyi*. This last, planted by itself 100 yards away from the others, was affected just in the same way. *C. Gunisoni*, though classed by Mr. Purdy as subject to disease, has been quite free from it with me the last two years, but I fancy my bulbs have come from a different locality of late. He also includes *C. splendens* and *C. splendens atroviolaceus* as partially subject to the attack, but I have never noticed it on either of them in any year, nor on *C. Lyoni*, which is particularly vigorous and free.

There is, however, one point of congratulation about this disease, that the kinds that are attacked by it, though beautiful, are not the most so by a long way. The lovely *venustus* and *Eldorado* groups are quite free, also the *Cyclobothras* and *Star Tulips*. One would like to know more about the disease. I have tried several remedies, but they apparently make no difference, and it is very strange that it confines itself to the desert species and never spreads to the others, though planted side by side. I have not found so far that it affects the bulbs, as they always turn up larger than when planted. I have lifted immense bulbs of *C. Kennedyi* of which the flower-spikes have gone off just before opening. All the *Calochorti* make good bulbs and larger than when planted. This is due, I believe, to cutting the flowers and not letting them seed. It cannot be too often repeated that to grow *Calochorti* successfully you must give them the necessary soil and situation, and the principal factor of all, thorough drainage. Even this is easily obtained on a clay soil by means of a raised bed and a mixture of a light porous material. I do not think there is any garden where a small spot could not be made to suit their requirements, which have so often been mentioned in these columns. R. W. WALLACE.

*Co'chester.*

**Erodium chrysanthum and Stachys chrysantha.**—Two exceptionally charming alpine plants are in flower here now, viz., *Erodium chrysanthum* and *Stachys chrysantha*. I raised them this spring from seeds collected last year in the high mountains of the Southern Peloponnese, so their complete hardiness has yet to be tested. In each the colour is a delicate lemon-yellow, and in the *Erodium* it is set off by most attractive foliage. The sight I once had of a plant of the *Erodium* in Herr Froebel's nursery at Zurich loaded with flowers is a thing I shall not readily forget.—A. K. BILLEY, *West Kirby.*

**Acers in flower garden.**—Silver-leaved Acers are now much used in flower gardens, and with very good effect too. In large beds three or four nice-sized dwarf bushes break the monotony and blend well with such things as scarlet Geraniums,

yellow *Calceolarias*, *Petunias*, and the like. They may either be planted permanently, being kept judiciously trimmed in each season, or grown in large-sized pots, and each year plunged in the beds in June. One *Acer* in the centre of smaller round beds suits well, and in corner beds the plants trained in standard form and planted beneath with *Lobelia cardinalis* on a groundwork of blue Tufted Pansies produces a very good effect. Flower gardens frequently are far too flat and formal, and anything of the above character used sparingly helps to give grace and beauty.—C. C. H.

**Clematis Vitalba.**—Few plants are more beautiful during the late summer and autumn

wall. For many years this plant must have held possession, for it was yards away from the wall in places, and the long pendent shoots in every direction were full of the characteristic corymb of flower, which scented the whole garden. Such a plant is extremely beautiful, and would be much more often seen but for the shearing, clipping and clearing-up propensities of many who take charge of such gardens.—R.

## TREES AND SHRUBS.

### MYRTLES IN TUBS.

THE accompanying illustration represents one of five specimen Myrtles which we have here in tubs. They are the finest plant of the kind I ever saw. I have therefore sent you their dimensions, which are as follows: Height, 10 feet from the bottom of the tubs diameter, 4 feet, and each specimen is the exact counterpart of the one represented in the illustration. The plants are placed outdoors for the embellishment of the grounds during the summer months. I consider them far better for the purpose than such things as *Bays*, *Laurustinus*, *Portuguese Laurel*, &c. They require to be housed during winter but Myrtles are worth the attention more than many subjects which find shelter during the winter months in cold greenhouses. A few degrees of frost, however, will not harm them. You should be interested to know where finer plants in tubs or pots can be seen.

J. EASTER.

*Nostell Priory Gardens,  
Wakefield.*



*Myrtle in a tub. From a photograph sent by Mr. J. Easter, Nostell Priory, Wakefield.*

months than our indigenous *Clematis* or *White Vine*. In moist places in almost every county it follows the beautiful wild *Spiraeas* in hedgerows and banks, rambling through and over the thickest hedges, and making a feature for months after the flowers have faded by the feathery seed-vessels. It should be more freely planted in connection with semi-wild gardening, and even in the garden proper it does not look out of place. In a fine old garden in Gloucestershire, well known for the grand old specimens of herbaceous and other plants therein contained, I noted it a week or two since growing quite loosely and naturally over a wide arch in the kitchen garden

little additional warmth. The flowers are arranged in a totally different manner from those of the well-known *E. Crista-galli*, forming as they do a dense cluster on the upper portion of a tall raceme, which stands quite clear of the foliage. Probably the reason that it is so seldom seen is that it cannot be grown as a bush however it may be stopped and tied about; but its natural habit is to form a tall rugged stem, branching out at a height of 6 feet or so, and the lower portion is altogether bare of foliage, the leaves being confined to the points of the shoots. Any appearance of nakedness may, however, be readily prevented by associating this *Erythrina* with other subjects.

clusters of leaves on the points of the shoots are admirably adapted to a setting to the brilliantly coloured blossoms.—T.

**The Venetian Sumach** (*Rhus Cotinus*).—This shrub, also known as the Smoke Plant, is at present very beautiful, the rosy purple feathered clusters with which its shoots are smothered being most effective. The great recommendation is the lasting qualities of its display, which continues attractive for nearly two months.

**SOCIETIES AND EXHIBITIONS.**

**NATIONAL DAHLIA SOCIETY.**

CRYSTAL PALACE, SEPTEMBER 3 AND 4.

It is not too much to say that the introduction of the Cactus Dahlia saved the large show and fancy exhibition from extinction as exhibition flowers. The Dahlia had been a prominent exhibition flower for many years, but these who take an interest in it are tired somewhat of it. The Dahlia Society had declined, and the demand for varieties was restricted. Then came the Cactus type in the form of Juarez, and with it the single scarlet Cecinea. The advent of these brought something which at once hit the popular taste, and from that moment a revival of interest in the Dahlia commenced. One or two old species or varieties of the single Dahlia also appeared. These were seeded from. Many new varieties were raised, and for a time this type had an unusual run of popularity. But their fleeting character told against them, and they are now but little grown as compared with their popularity ten years ago. Meanwhile, the pretty, small, symmetrical pompon varieties—one of the most useful sections grown, either for cutting or garden decoration—were being recognised, and since then a great many new varieties have been raised. The habit of growth has been reduced and rendered more compact. The improved varieties are wonderfully free flowering, and better suited than any other section of Dahlias for garden decoration. But the Cactus type has advanced by leaps and bounds. The decorative varieties, so called, are rapidly disappearing, and the new forms of Cactus taking their places, and though at the outset some attempts at crossing with the decorative varieties were necessary, in order to obtain new tints of colour, the peculiar form of Juarez has not only been retained, but rendered more refined. Quite unexpected tints of colour and peculiarities of form, as seen in the new spire-like varieties Fantasy and Arachne, have appeared. A wealth of new Cactus varieties has appeared this season, many of exceeding beauty and symmetry. An improvement in the habit of growth is now necessary; it needs to be reduced, to be rendered more compact; greater free flowering is indispensable, and the flowers thrown on erect stems well above the foliage. In some of the newer varieties these desirable characteristics are being developed, and they will be further extended in the next few years.

This was one of the most extensive exhibitions, perhaps, yet held by the National Dahlia Society, and on some respects one of the best, especially in the class for Cactus varieties. There were five collections of eighteen bunches, each bunch having six blooms, and there were four collections of two varieties, also with six blooms in a bunch. This made a most imposing bank of rich blossoms and attracted considerable attention. Despite the stormy weather, the blooms were generally fresh and unstained. The same may be said of the pompon varieties, which were shown in bunches of ten and six blooms, and highly delightful in many of them were—small, symmetrical, and gay in tint.

**SHOW AND FANCY DAHLIAS.**

The objections made to the present method of exhibiting the show and fancy Dahlias are always heard at exhibitions, but nothing yet attempted has answered in the way of change. If the lines of flowers are formal, yet the whole of the bloom can be seen, and it is possible to make the stands

quite attractive by an intermingling of contrasting colours. The largest collection was for sixty varieties, show and fancy distinct, and the admission of the fancy varieties helps the attractiveness of a large number of blooms. Messrs. Keynes, Williams and Co., nurserymen, Salisbury, took the first prize with a fine, bright, even lot of flowers, among them the following dark and crimson selfs: William Rawlings, Nubian, Willie Keith, Arthur Rawlings, Thomas Hobbs, and Duke of Fife. Of tipped flowers there were Miss Barker, J. T. West, Mrs. Saunders (a charming fancy yellow, each petal distinctly tipped with white), Mrs. P. Wyndham, and Henry Walton. Of pretty light varieties there were Virginal, Mrs. Gladstone, and Mrs. Slack. Of yellow selfs, William Powell, R. T. Rawlings, John Hickling, and J. N. Keynes. Mr. Charles Turner, Royal Nursery, Slough, was a good second, some of the blooms showing the effects of the weather; and Mr. John Walker, Thame, third. Mr. Walker came in first with forty-eight blooms; he had well-finished examples of John Standish, Willie Garratt, Victor, Shirley Hibberd, Duke of Fife, Mrs. Langtry, Harry Turner, Miss Cannell, R. T. Rawlings, Glowworm and J. T. West. Mr. C. Turner was second, having a few specially good blooms in Mrs. Saunders, George Gerdon, Rosamond, Prince Bismarck, Mrs. Langtry, Matthew Campbell and Shottesham Hero. Mr. S. Mortimer, Farnham, was third. Then came thirty-six varieties, and here Mr. G. Humphries, nurseryman, Chippenham, was first. His finest flowers were Duke of Fife, Harry Turner, Miss Cannell, J. T. West, Mrs. G. Rawlings, William Rawlings and William Powell. Mr. J. T. West, Cornwallis, Brentwood, was second, and Mr. J. Stredwick, St. Leonards, third. Mr. Humphries was also first with twenty-four varieties, and Mr. West second. The best twelve blooms came from Mr. J. R. Tranter, Henley-on-Thames; Mr. A. Rawlings, Romford, was second.

The amateur growers also had certain classes for show and fancy Dahlias. There were ten competitors with twenty-four varieties. Mr. T. Hobbs, Lower Easton, Bristol, was first, and as his flowers were particularly good we name a few of them, viz., Duchess of York, Vice-President, John Hickling, Matthew Campbell, Imperial, Mrs. Gladstone, Mrs. W. Slack, Thomas Hobbs, Muriel Hobbs (new), and Prince of Denmark. Mr. A. Starling, Havering, Romford, was second, and Mr. T. Anstiss, Brill, third. Mr. S. Cooper, Chippenham, had the best twelve; Mr. W. Mist, Ightham, Sevenoaks, was second. Mr. C. F. Keep, Streatham, had the best six, Mr. G. Wyatt, Twickenham, being second.

Then came two classes for fancy Dahlias only, Mr. S. Cooper having the best twelve varieties, his leading blooms being Frank Pearce, Mrs. John Downie, Mr. Saunders, Matthew Campbell and Lottie Eckford; Mr. R. Burgin was second. Mr. A. Starling had the best six blooms of fancies, very good indeed; they were Rev. J. B. M. Camm, S. Mortimer, Peacock, Duchess of Albany, S. Cooper and Dazzler. Mr. E. Jefferies, Langley Burrell, was second.

There were also classes for Dahlias in colours. The best dark Dahlias were Prince of Denmark, Shirley Hibberd, and W. Rawlings; the best light, Mrs. Gladstone, each of the three prize-winners having this variety. The best yellow selfs were John Hickling, J. N. Keynes, and R. T. Rawlings; the best reds, Mrs. J. Downie in a self form, John Standish, and Arthur Rawlings. The best white self was John Walker. The best tipped Dahlia was Mrs. Saunders; the best striped, Mrs. J. Downie; the best edged, Miss Cannell and J. T. West.

**CACTUS DAHLIAS.**

The best eighteen blooms of Cactus Dahlias, six in a bunch, came from Messrs. J. Burrell and Co., Cambridge, very bright, fresh, and even, and a good representative collection. They were Palka (new), Mrs. A. Beck, Mrs. W. Noble, Lady Penzance, Gloriosa, Delicata, Fantasy, Fusilier, Matchless, Mrs. K. Foster, Starfish, Cinderella, and Regulus (new). Messrs. Keynes and Co.

were second, having some very fine varieties, such as Keynes' White, which promises to be a serviceable sort; Starfish, one of the very best; Lady Penzance, Cycle, Delicata, and the following fine new varieties: Ruby, Arachne, Alfred Vasey, and May Service. Messrs. J. Cheal and Sons were third. Mr. J. T. West had the best twelve bunches, among them a beautiful pale mauve seedling named Island Queen. Mr. G. Humphries was second, also with an excellent stand. The best twelve decorative varieties came from Mr. M. V. Seale, Sevenoaks. Messrs. J. Cheal and Sons were second.

In the amateurs' division, Mr. W. Mist had the twelve best Cactus, showing in fine character Starfish, Mrs. Wilson Noble, Mrs. A. Beck, Miss A. Nightingale, Matchless, and Gloriosa. Mr. E. Brown, Harley, was second. Mr. E. Mawley, Berkhamsted, had the best six varieties, and Mr. C. E. Wilkins, Swanley Junction, was second. The best nine Cactus competing for the special prizes offered by Messrs. J. Cheal and Sons came from Mr. C. E. Wilkins, the leading varieties being Mrs. Wilson Noble, Lady Penzance, Fusilier, and Charles Woodbridge. Mr. H. A. Needs, Horsell, was second.

**POMPON DAHLIAS.**

The best twenty-four varieties, ten blooms in a bunch, were staged by Messrs. Keynes and Co., and comprised many of the leading varieties; Messrs. J. Cheal and Sons were second, and Mr. C. Turner third. Messrs. J. Burrell and Co. had the best twelve bunches, all very good. The leading sorts were Emily Hopkins, Eurydice, Distinction, Bacchus, Nerissa, E. F. Jungker, Douglas, and Geo. Brinckman, a good white, but rather large. Mr. J. T. West was second, and he had, differing from the foregoing, Captain Beyton, Donovan, Little Dorrit, and Tommy Keith. In the amateurs' division for six varieties, Mr. W. C. Pagram, Weybridge, was first, and Mr. J. Hudson, Gunnersbury House, Acton, second. Mr. J. Jefferies had the best six varieties, six blooms of each.

**SINGLE DAHLIAS.**

Only two collections of twenty-four bunches were staged, ten blooms in a bunch. Messrs. J. Cheal and Sons were placed first with some charming varieties such as Phyllis, Aurora, Alba perfecta, Beauty's Eye, Amos Perry, Donna Casilda, orange and rosy-purple, very effective; Jack Sheppard, Marion Hood, pink; Naomi Tighe, Demon, Polly Eccles, and Miss Glascock. Mr. Seale was second. Mr. John Walker was the only exhibitor of twelve bunches, the flowers a little large, the best varieties Victoria, Mrs. Harris, Miss Roberts, Maude and W. C. Harvey. Mr. T. W. Girdlestone had the best six varieties, ten blooms of each, consisting of Cadet, Naomi Tighe, Jeannette, Polly Eccles, F. Leslie, and Phyllis. Mr. C. Osman, Sutton, Surrey, was second. Mr. E. Mawley had the best six bunches; Mr. J. Hudson was second. Fancy single Dahlias were represented by some very pretty varieties. Mr. M. V. Seale was first, having an excellent selection, viz., Fanny Harker, Miss Parrot, May Sharpe, Emmie, Miss Glascock, Duchess of Albany, Mrs. Wythes, and Alice Seale, with four others. Messrs. J. Cheal and Sons were second. They had, differing from the foregoing, Duchess of Marlborough, Harry Brater, Jack Sheppard, Jeannette and Gulielma.

For an epergne of Dahlias, the first prize was won by Miss L. Hudson, of Gunnersbury House, who used small blooms of Cactus varieties in shades of yellow and mauve, and light-coloured blooms of singles and single Cactus varieties. Mr. W. C. Pagram, of Weybridge, was second, with a large and imposing arrangement. For a vase of twelve Dahlia blooms, Mr. R. Edwards, of Beechy Lees, Sevenoaks, was first, with a well-arranged exhibit consisting of enormous flowers of Mrs. F. Fell and Fusilier. Miss L. Hudson was second, using flowers of Beatrice, Earl of Pembroke and Mrs. Peart. In the great commemorative class for an extensive decorative exhibit, the first prize was won by Mr. Seale, of Sevenoaks, whose arrange-

ment was highly effective. It consisted of a groundwork of the orthodox exhibition bunches, from which rose bouquets and epergnes, the whole being softened with Ferns and ornamental foliage. Graceful arches were used at the back and shorter ones in front. On the front of cloth which surrounded the table were the dates 1837-1897, very skilfully worked in two shades of red pompons. The second prize went to Messrs. Cheal and Sons, Crawley, for a less ambitious, but very tasteful exhibit, in which all the flowers used were of the highest quality. A pyramid of Cactus varieties formed the centre piece, with smaller banks of pompons on each side. Two epergnes filled with single Cactus varieties were very pretty. The table was effectively lightened by the use of graceful Palms and Ferns.

Certificates of merit were awarded to the following new varieties: *Show Dahlias*: Muriel Hobbs (T. Hobbs), a clear, soft yellow self of fine shape; Mrs. W. Fellowes (W. Fellowes), yellow ground, heavily suffused with orange-red, excellent outline and centre; Harbinger (G. St. P. Harris), soft pinkish rose, a very pleasing shade of colour, fine shape; and J. R. Tranter (J. R. Tranter), pale orange-red, good petal and outline. *Cactus* varieties: Night, rich maroon, brighter towards the edges of the petals; Daftodil, soft primrose, a lovely variety of exquisite shape, and Tillie, salmon, suffused with pale rose, the petals tinged with soft mauve; all of the best Cactus shape. From Mr. J. Stredwick, St. Leonards. *Regulus*, deep shaded crimson, came from Messrs. J. Burrell and Co., Cambridge. Alfred Vasey, brilliant orange-salmon, flushed with rose; Mary Service, golden salmon ground, flushed at the points of the petals with delicate rosy mauve, very distinct; Capstan, salmon, suffused with red, and Arachne, one of the curious spider-like forms, the curling, white, tubular forets margined at the sides with bright crimson, came from Messrs. Keynes, Williams and Co., Salisbury. E. J. Deal, a bright scarlet, came from Mr. S. Mortimer, Farnham. Annie Turner, orange-red, with pale cerise shading, and Island Queen, soft lilac-mauve, a lovely variety, came from Mr. G. Humphries, Chippenham. *Pompons*: Hypatia, deep terra-cotta, with yellow centre, from Mr. C. Turner; and Nellie Broomhead, soft lilac, of fine shape, from Mr. J. T. West, Brentwood. *Singles*: Colton Beauty, white, with edging of pale yellow, an exquisite variety; from Mr. T. Bonny.

#### MISCELLANEOUS.

A large, handsome group of tuberous Begonias and ornamental-foliaged plants was staged by Messrs. J. Laing and Sons, Forest Hill. The blooms were remarkably good in form and colour. The most striking of the foliage plants were the very beautiful Caladiums. A miscellaneous group of cut flowers and hardy herbaceous plants came from Messrs. J. Peed and Sons, Roupell Park Nurseries. An extensive collection of Cactus, decorative and pompon Dahlias was shown by Messrs. Cannell and Sons, Swanley. Mr. T. Charlton, Tunbridge Wells, staged a collection of hardy herbaceous flowers, including some good varieties of Helianthus. A large exhibit of Cactus, decorative, and pompon Dahlias came from Mr. T. S. Ware, Hale Farm Nurseries, Tottenham. The pompons were not generally very fresh, but the Cactus bunches were very good. A group of exceedingly good Cactus Dahlias, with a few pompons, was shown by Messrs. Carter, Page and Co., London Wall, E.C. The blooms were arranged in vertical rows on very narrow staging, each flower in a tiny jar, which was practically invisible when the exhibit was finished. Excellent Cactus Dahlias were also shown by Mr. John Green, Norfolk Nurseries, Dereham, who also had some perfect blooms of the lovely pompon Ganymede. A large exhibit of cut Roses came from Messrs. Wm. Paul and Son, Waltham Cross. Some of the most pleasing varieties were Queen Mab, a lovely apricot-tinted China; the common pink China Rose, Marie van Houtte, Kaiserin Augusta Victoria, Viscountess Folkestone, Georges Nabonnand, Gloire des Polyanthas, and Mme. Pierre Cochet.

### ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 7.

THE show on this occasion was again a comparatively small one, though it was by no means devoid of interest. The majority of the exhibits were submitted to the floral committee, and in this section the most striking were a large group of Nepenthes from Chelsea, Eucharis amazonica from the Fulwell Nursery, Twickenham, and a very fine collection of Dahlias from the Lowfield Nurseries, Crawley. Before the fruit committee, one of the principal exhibits was an imposing collection of fifty dishes of fruit from Syon House Gardens, containing varieties of Peaches, Nectarines, Apples, Pears, Plums, &c. There were also two dozen good Melons from Barnes, and a very beautiful collection of outdoor Peaches and Nectarines from the Royal Gardens, Windsor. The fruit was throughout well coloured. Not many Orchids were shown, the largest exhibit being a collection from the Royal Exotic Nurseries.

#### Orchid Committee.

A first-class certificate was awarded to

CATTLEYA EUPHRASIA, a cross between *C. superba* and *C. Warscewiczii*. The sepals and petals are deep rose-purple, of fine form and substance. The front lobe of the labellum is the most intense in colour we ever remember to have seen, being of a rich velvety crimson-purple margined with a lighter shade of colour, the side lobes rich purple, shading to white and yellow at the base, where it is lined with the purple of the front lobe. The plant carried a raceme of two flowers. From Messrs. Veitch and Sons.

An award of merit was given to

RHYNCHOSTYLIS CELESTIS (Cambridge Lodge variety).—The sepals and petals are nearly white, shaded with blue. It is the finest form of this well known Orchid we have seen. The plant carried two spikes of flower. From Mr. R. J. Measures.

Botanical certificates were awarded to the following: *Acineta Barkeri*, the sepals deep yellow, the petals yellow spotted with deep brown, lip yellow, heavily spotted with deep brown. The plant bore two racemes of thirty flowers each. From Major Joicey, Sunningdale Park. *Oncidium panduratum*, a small-flowered pretty species with brown and yellow flowers, from Mr. W. Ellis, Dorking; and *Brassia Lawrenceana*, the sepals and petals pale yellow spotted with brown, the lip pale greenish-white spotted with brown at the base, from Messrs. J. Veitch and Sons.

Messrs. J. Veitch and Sons were awarded a silver Flora medal for a large and interesting group, amongst which were finely-flowered plants of *Oncidium incurvum* and *O. varicosum*. Amongst *Cypripediums* there were large pans of *C. oenanthum superbum*, *C. Charlesworthii*, a dark form of *C. Carnusianum*, *C. Morganae langleyense*, and *C. Leucetia*, a new variety of the *Selenipedium* group, the result of a cross between *C. calurum* and *C. Boissierianum*. The most prominent amongst the hybrid *Cattleyas* was a grand form of *Laelio-Cattleya Clonia*, the sepals and petals delicate rose, of fine form and substance. The lip was deep velvety crimson, the side lobes being of the same colour and lined and mottled with yellow and purple through the throat. *L.-C. Nysa*, another distinct variety, is the result of crossing *L. crispa* and *C. Warscewiczii*. The sepals and petals are pale rose, lip deep crimson, heavily tinged and margined with rose, the side lobes pale rose, shading to deep yellow and rich purple-brown at the base. *L.-C. callistoglossa* bore two fine flowers. *L.-C. Eunomia*, a grand form of the dwarf-growing section, is the result of a cross between *C. Gaskelliana* and *L. pumila*, having the characters intermediate between both parents. *L.-C. Epicasta* (*C. Warscewiczii* × *L. pumila*) and *L.-C. Parysatis* (*C. Bowringiana* × *L. pumila*), also belonging to the same section, were most interesting. *Cattleya Melpomene* (*C. Forbesi* × *C. Mendeli*) is a new hybrid with very pale rose-veined

sepals and petals, the lip rose in front, veined with a darker shade of rose, the base deep yellow shaded and lined with deep brown. *Cyrenocyclorhizon* with two flowers, *Angraecum Eichlanum*, a good form of *Aerides Lawrenceana*, *Odontoglossum grande*, a spotted form of *O. P. catorei* and *Miltonias* in variety were also shown. Messrs. F. Sander and Co. sent *Cypripedium callo-Rothschildianum*, another very similar variety between *C. barbatum* and *C. Rothschildianum*, a fine form of *Miltonia Morrelliana*. M. Peters (a small-flowered variety with colouring of *Miltonia Morrelliana*), and a grand plant of *Odontoglossum Kramerii* with fifty spikes of bloom. Messrs. Hugh Low and C. Clapton, sent *Cypripedium Alfred Hollington* dark form of *Laelia elegans*, *Cattleya Minucia* with four flowers, and *Cypripedium Memoria Men*. Mr. F. Hardy, Tyntesfield, Ashton-on-Mers was awarded a silver Flora medal for a collection of rare and interesting Orchids, amongst which was a fine-grown plant with four flowers *Cattleya Hardyana*. *Cattleya Ashtoni* is a small-flowered variety with pale rose sepals and petals, lip purple, shading to yellow at the base. *C. phytophlebica* has delicate rose sepals and petals, lip rose, suffused with purple in front, shading white, and lined with purple at the base. A *Laelio-Cattleya elegans* and *Cypripediums* in variety were also included. Mr. A. Warburton, Vine House, Haslingden, sent *Cypripedium signe* Laura Kimbell with two flowers. R. J. Measures sent a dark form of *Cattleya Schofieldiana*, the sepals and petals beautifully spotted with deep brown. Mr. C. J. Ingram sent *Laelio-Cattleya Gazelle* (*C. bicolor* × *L. elegans*) similar to *L.-C. Andreana*, and *Laelia splendens* (*L. crispa* × *L. purpurata*). This is a lovely, profuse flowering hybrid, the sepals and petals deep rose, much fringed at the edges; the lip is crimson-purple, heavily fringed at the margin with rose, the side lobes pale rose, shading white, and heavily lined with purple at the base. This is a most interesting hybrid, as it clearly shows the parentage of *C. exoniensis*, proving that *crispa* was not the seed-bearing parent. M. Harris, Lambhurst, sent *Cattleya Miss Harris* hybrid resembling both in growth and general characteristics of the flower a dark form of *Schilleriana*. It is the result of crossing *Mossia* and *C. Schilleriana*. Mr. T. Stat Stand Hall, Manchester, sent *Cypripedium Derby*, a lovely hybrid, previously certified and described in these columns. It certainly proves under cultivation. *C. Lady Isabelle* (*Rothschildianum* × *C. Stonei*), a pretty form of the foliage showing considerable tessellate which is remarkable, seeing that both parents have plain green foliage, and *C. triumphans* (*Sallierii Hyanum* × *enanthum superbum*) was also included here.

#### Floral Committee.

A first-class certificate was given to—

NEPENTHES TIVEYI.—This is a handsome variety of excellent growth, the pitchers very sharp dull green in colour, marked with reddish ochraceous late. The parents are *N. Veitchii* and *N. Cucullaria*. From Messrs. Veitch and Sons.

Awards of merit were given to—

MICHAELMAS DAISY MRS. W. PETERS.—A plant of dwarf and bushy habit, the flowers pure white each about an inch across, and borne in great profusion. The plants were from cuttings struck in April of this year. From Mr. W. Peck, Leatherhead.

HIBISCUS MANHOT.—This is of strong, shrubby growth, the flowers delicate lemon-yellow with shade of maroon on the backs of the petals, rich deep maroon in the throat. It is a charming variety, and appears to be a free bloomer. From Mr. Fulford, Moor Hall Gardens, Cookham.

CACTUS DAHLIA F. C. PAWLE is a bloom good form with fluted and pointed petals. It has a good centre, and in colour resembles *Bertram*, but is somewhat richer, and does not burn in the sun like the variety just mentioned. From Messrs. Cheal and Sons, Crawley.

An excellent collection of *Nepenthes*, containing many very fine varieties, was staged by Messrs. Hitch and Sons, Chelsea. Some of the most striking were *N. mixta* × *N. Curtisi*, with various little green pitchers each about 1 inch long; *N. ampullaria vittata*, with beautifully spotted and delicately-tinted little pitchers; *N. mastersoniana*, *N. Hookeriana*, *N. Morgana*, *N. urkei excellens*, with very beautiful and brightly-coloured pitchers, and *N. albo-marginata* (silver-gilt Flora medal). Another exhibit of exceptional interest was a collection of *Sarracenia*s and *Phalotia*, from Mr. R. J. Measures, Flodden Road, Cumberwell (gardener, Mr. H. J. Chapman). A few of the many good things were *S. planorrhoda*, *S. Chelsoni*, *S. Courti*, *S. Stevensi*, *Wrightleyana*, most exquisitely marked; *Darlingtonia californica*, and some beautiful plants of *Phalotia follicularis* (silver-gilt Flora medal). A very handsome effect was produced by a large and representative group of *Crotens* from Mr. Pears, Isleworth (gardener, Mr. Farr). The plants were very clean and admirably grown, and the colouring very good (silver Flora medal). A group of fine plants of *Eucharis amazonica* came from Mr. F. Knight Eames, Fulwell Nursery, Twickenham; all clean, healthy plants, and flowering freely (silver Flora medal). Messrs. Hitch and Sons were represented by a group of *Erine Fothergilli*, finely-grown plants, bearing freely masses of brilliant scarlet flowers. Mr. Robert Owen, of Maidenhead, sent a small collection of cut *Cannas*, the best being *Comte de Douchaud*, *Camille Bernardin*, *Louis Van Houtte*, *Général de Miribel*, *Monsieur Celembet*, and *President Chandon*. Messrs. J. Cheal and Sons, Lawley, staged a splendid collection of *Dahlias*, containing good examples of show, *Caetus*, *Single*, and *pompon* varieties. The shows were remarkably good both in form and colour. Particularly striking were *Major Barttelot*, Mrs. Morgan, *Goldfinder*, *Crimson King*, *Duchess of York*, and *Thomas Hobbs*. The singles were clean and bright. The best bunches were *Polly Peles*, *Cadet*, *Donna Casilda*, *Northern Star*, *Limon*, *Harry Brown*, and *Miss Morland*. The *Cactus* varieties were fresh and of splendid form. Some of the finest kinds were *Lady Penzance*, *Gas*, *Woodbridge*, *Beatrice*, *Starfish*, Mrs. Leonard Seymour, Mrs. Kingsley Foster, and F. C. Cole. The pompons included some good bunches of *Phoebe*, *Clarissa*, *Eurydice*, *Jessica*, *Donovan*, *Arion*, and *Gaiymede* (silver Flora medal). Mr. J. F. Such, Royal Berkshire Nurseries, Maidenhead, also had a collection of *Caetus Dahlias*, in which were good blooms of *Gloriosa*, *Kynerith*, *Allicata*, and Mrs. Peart. Mr. John Walker, Tame, Oxon, exhibited *Caetus* and show *Dahlias* in good form. Of the former, *Beatrice*, Mrs. W. Noble, and *Harmony* were good (bronze Banksian medal). Baskets of cut shrubs, &c., came from Messrs. Veitch and Sons, the varieties being *Episcus totus albus*, *Hibiscus Lady Stanley*, *H. Single Painted Lady*, *H. celestis*, *Andromeda aurea*, *Hymenanthera crassifolia*, *Acer palmatum sanguineum*, and *Robinia hispida*. A small but interesting group of cut flowers came from Mr. Trevor Lawrence, Burford, Dorset (gardener, Mr. Bain). Notable things were *Clematis Davidiana*, *Lobelia Gerardi*, *Mina lobata*, and a collection of very fine *Pentstemons*. A group of hardy flowers, containing *Verbena venosa*, *Clematis flammula*, *Alstroemeria psittacina*, and *Lobelia Meri*, came from Messrs. Barr and Sons, Covent Garden (bronze Banksian medal). Mr. T. S. Wre, Tottenham, also showed hardy flowers (bronze Banksian medal). A group of very handsome French *Marigolds* was shown by Mrs. Dobbie and Co., Rothesay.

**Fruit Committee.**

There were some excellent collections of hardy fruit, notably those from the Royal Gardens and Syn House. Melons were shown in quantity, with some good Grapes, Peaches and Tomatoes.

Awards of merit were given to the following:—**ELON MRS. HERRIN.**—The result of crossing Favorite with an unnamed seedling. It is a

fruit above medium size, flesh white, of good depth, and of excellent flavour, skin bright golden, nicely netted. From Mr. Herrin, The Gardens, Droppmore, Bucks.

**BLACKBERRY MITCHELL'S SEEDLING.**—A very fine fruit with a brisk acid flavour. It is a very free bearer. From Mr. Mitchell, Fir Cottage, Farnham Royal.

Mr. O. Thomas, the Royal Gardens, Frogmore, sent nearly forty dishes of Peaches and Neectarines, and a couple of baskets of Tomato Golden Jubilee. There were a few duplicate dishes, but all were good and well deserved the award given. Mention must be made of Pine-apple, Lord Napier, Elruge, Humboldt, Victoria, Hardwick Seedling and Spenser Neectarines. The best Peaches were *Grosse Mignonne*, Stirling Castle, Noblesse, Bellegarde, Princess of Wales, *Crimson Galande*, Dymond, *Violette Hâtive*, Prince of Wales, Barrington and Dr. Hogg (silver-gilt Knightian medal). Mr. Wythes, Syn House Gardens, Brentford, sent a collection of early Apples and Pears, with a dozen varieties of Peaches and a few Neectarines. They were nicely arranged in small groups on coloured foliage, and not on plates, as is usually the case. We like this mode of arrangement for hardy fruits. The best Pears were *Williams' Bon Chrétien*, *Souvenir du Congrès*, *Margaret Marillat*, *Durendean*, *Emile de Heyst*, *Fondante d'Automne*, *Gratioli of Jersey*, *Pitmaston Duchess*, *Dr. Jules Guyot* and *Louise Bonne of Jersey*. Of the Apples, *Gravenstein*, *Duchess of Gloucester*, *Worcester Pearmain*, *Irish Peach*, *Yellow Ingestre*, *Lord Suffield*, *Grenadier*, *Wealthy* and *Cellini* were the best. Peaches in variety, Plums and Mulberries were also included (silver Knightian medal). A collection of Melons in variety came from Mr. W. Kemp, Barnes, the best fruits being *Hero of Lockinge*, *Golden Ball*, *Earl's Favourite* and *Blenheim Orange*, with several seedlings (silver Banksian medal). Mr. Miller, Ruxley Gardens, Esher, sent some very fine Princess of Wales Peaches, with a good dish of Yorkshire Beauty Apple (bronze Knightian medal). A cultural award was given to Mr. W. W. Taylor, Forest Hill, for three excellent bunches of Grape Madresfield Court, good berries and well coloured. Similar awards were given to an excellent dish of Stirling Castle Peaches, well grown and nicely coloured, from Mr. Howe, Streatham Common, and very fine Peaches (Exquisite) from Mr. J. Coles, Heger-Balcombe, Sussex. A new seedling Nut was sent by Mr. Mitchell, Farnham Royal, and thought well of by the committee. Melons were plentiful. Mr. Herrin staged several seedlings, also Mr. Scott, Lydney Park, Gloucester, Mr. Marsh, Clarence House, East Cowes, and others, but most of them lacked flavour. Mr. Farr, Spring Grove Gardens, Isleworth, sent a plant of All the Year Round Tomato laden with fruit and bearing enormous clusters. Mr. Russell, The Nurseries, Richmond, Surrey, sent fruiting plants of a Tomato named Campbell's Prolific. This the committee asked to be sent to Chiswick for trial. The plants had been lifted from the open ground and were fruiting very freely. Tomatoes were sent by Messrs. Francis, Frew and Son, Lyminster, but of no special merit.

The Veitch prizes for flavour brought forth nine dishes of Pears and eight of Apples. The first prize was given to Mr. Herrin, Droppmore, for *Williams' Bon Chrétien*, the second going to Mr. Wythes, Syn, for larger fruit, but less ripe. The other varieties staged were *Dr. Jules Guyot*, *Jargonelle*, *Jersey Gratioli*, and *Early Roussellet*. Apples were good, Mr. Mayne, Bicton Gardens, Budleigh Salterton, being first with a nice dish of *Kerry Pippin*; Mr. Wythes second with a good sample of *Gravenstein*. The other varieties staged were *Worcester Pearmain*, *Oslin*, and *Devonshire Quarrenden*.

The lecture on *Nepenthes* given by Mr. H. J. Veitch was well attended, the lecture being illustrated by diagrams and specimens. Mr. Veitch stated he would avoid as much as possible the botanical part, dealing chiefly with the plants from a horticultural standpoint. No wonder

travellers expressed great surprise when they first met with these plants. The first record we have of the *Nepenthes* was in 1661. It was then lost sight of for a time. In the eighteenth century, Linnaeus, to whom we owe the name *Nepenthes*, gave us interesting facts and named new varieties, but as regards the latter they were not plentiful at the date named. Many plants were lost owing to our houses at that period being unsuitable for cultivation. To Messrs. P. Veitch and F. W. Burbidge we are indebted for four splendid species from Borneo. Dried specimens from their native habitat, also some very fine ones from Dublin (Trinity College), showed to what size the pitchers grew and their colours. Sir H. Low nearly fifty years ago found some splendid varieties, but at that time, unfortunately, failed to get them alive to this country. Others also a little later sent plants, but our stoves of that day, owing to the dry, hot fires, were no doubt answerable for many losses. In 1858 Sir H. Low made another attempt to send the splendid *N. Rajah*, a noble species, but met with little success, and of seeds sent but few survived. Since 1872 many hybrid varieties have been raised, and at that period, through the aid of Miss North's drawings at Kew, we got the beautiful *Northiana*. Mr. Burbidge, after much labour, secured this fine Pitcher, which is such a great ornament to our stoves. The lecturer noted the value of *N. Mastersoniana*, one of the best of the hybrids. This, the result of crossing *N. Khasiana* with *N. sanguinea*, is one of our best and most easily-grown Pitchers. Plants of this variety were shown, some following one parent, some the other. The hybrids raised in this country in most cases made a much freer growth than the older imported plants. Seedlings in their various stages were handed round, and the newer *N. Tiveyi* certificated that day was much admired. This is one of the latest crosses. The *Nepenthes* occupied a wide range of country and were much scattered, but most of them were close to the sea. The larger species had been found from 5000 feet to 8000 feet above the sea, but there was a great uniformity of temperature—rarely more than 5° difference during the day, with abundance of moisture. Many other interesting points were referred to, including their mode of growth, shape of leaves, &c. Mr. Burbidge said they owed their best thanks to Mr. Veitch for his most interesting paper and for the specimens sent. He described the various formations of the plant, how built up, and the best means to get fine Pitchers in this country. He also made some interesting remarks on collecting and the difficulty in obtaining new species.

**NATIONAL CHRYSANTHEMUM SOCIETY.**

SEPTEMBER 7, 8, and 9.

THE display made by the combined efforts of the *Dahlia*, *Chrysanthemum* and *Gladioli* growers at the Royal Aquarium, Westminster, may be considered quite a success. In most cases the classes were each well filled, and the exhibits were also of a high order of merit. *Chrysanthemums*, as usual at this first exhibition, were only shown in a very limited quantity, and this year's display being more of an experimental one, supporters of the early flowering sorts may rest satisfied. On this occasion exhibitors were confined to the varieties included under the heading of "Early-flowering" in the society's Jubilee Catalogue, 1896. There were several interesting exhibits, and to make the show of these flowers more popular it will be necessary to add proved sorts to the list each year. Already it has been noticed several very excellent varieties have been omitted from the catalogue. That the early-flowering *Chrysanthemum* is essentially a plant for the hardy flower garden the class of exhibits staged seemed to distinctly prove, the bunches of small and medium-sized flowers having evidently been grown in the open with little or no disbudbing. *Dahlias* were the chief feature, these being exhibited in fine form and in large numbers. In the leading classes the blooms of the show and fancy sorts were very fine.

The chief interest was without doubt centred in the beautiful flowers of the Cactus type, their rich colour and pleasing form appearing to interest the majority. The winning stand of singles in the class for twenty-four bunches was a very fine lot, and well merited the distinction it gained. Pompons were largely shown. The trade display of Dahlias was not so fine as on some former occasions, but this was amply compensated for by the numerous entries in the competitive classes. Gladioli were shown in fine form by Messrs. Burrell and Co.

#### CHRYSANTHEMUMS.

In the class for twenty-four bunches there was only one competitor. Mr. Eric F. Such, the Royal Berks Nursery, Maidenhead, was awarded first prize. This was a fine exhibit, and contained large bunches of good coloured flowers in fresh condition. The most notable among them were Harvest Home, a pretty crimson and gold flower; Mme. Marie Masse, M. Gustave Grunerwald, M. G. de Dubor, Le Poete des Chrysanthème, and Mme. Eulalie Morel, pretty cerise and gold colour, of the Japanese sorts; while the best of the pompons, and these were good, were Mr. Selly, Piercy's Seedling, grand colour; Mr. W. Piercy, Longfellow, Blushing Bride and its bronze sport, Bronze Bride, Strathmeath, and Mme. Edouard Lefort, a pretty crimson and gold flower. There were three entries for twelve blooms of Mme. C. Desgrange. Mr. B. Calvert, gardener to Col. A. Houblon, Hallingbury Place, Bishop's Stortford, was an easy first with an even lot of flowers. Mr. Chas. Crook, gardener to Dowager Lady Hindlip, Hodson House, Droitwich, who had very fine blooms too, was placed second. The class for twelve blooms, any large-flowering variety or varieties except Mme. C. Desgrange, brought only one competitor, Mr. Calvert again showing handsome flowers of G. Wermig. These were good, full, and deep, and of a rich colour and fresh. Mr. Such was placed first for twelve bunches of pompons. His best sorts were Bronze Bride, Piercy's Seedling, Mme. E. Lefort, J. B. Duvoir, and Longfellow. This was a nice lot of flowers, large, fresh, and clean, but arranged on Moss, which was anything but attractive. Miss R. Debenham, St. Peters, St. Albans, secured second honours with smaller flowers, not well set up. Mr. Calvert was first with a vase containing six blooms (Japanese) of Mme. C. Desgrange, but the effect was lost by bad arrangement and the want of a little foliage. Miss Debenham was second, showing Edwin Rowbottom, a pretty little yellow flower, and arranged with Fern fronds. The class for six bunches of any of the yellow sports of Mme. C. Desgrange resulted in the first prize being awarded to Mr. Calvert, who staged four bunches of G. Wermig and two bunches of Mrs. Hawkins. This was a very handsome exhibit, and would have been better had more space been taken in arranging the flowers. In this class, as well as in one or two others, there was evidence that blooms of the late sorts had been hurried forward, but these were excluded, not coming within the list of those described as early flowering. Extra prizes were, however, given to these exhibits. In the amateurs' classes Miss Debenham was accorded premier honours for twelve bunches of Chrysanthemums (pompons allowed). Her best flowers were Vicomtesse d'Avene (splendid colour), G. Wermig, Edith Syrratt (rich purple-magenta), Edwin Rowbottom, Mme. Carmaux (pretty new white flower), Longfellow and Mrs. Cullingford. Mr. D. B. Crane, Highgate, N., was a good second, his best bunches being Mme. Marie Masse, Harvest Home and M. Dupuis. This exhibitor was also first for a vase of six blooms, showing Mme. C. Desgrange and Lady Fitzwygram, arranged with sprays of richly-toned Oak foliage and grasses. The class for an epergne was well contested, resulting in Mr. T. S. Williams, 4A, Oxford Road, Ealing, W., being placed first with a somewhat cumbrous arrangement. The form of the stand resembled a small umbrella in shape, with a neat base. The second prize was awarded

to Mr. D. B. Crane, who had a light arrangement, flowers, foliage and grasses being pleasingly associated together.

#### GLADIOLI.

The class for a collection of Gladioli spikes always brings a very large and handsome display, Messrs. J. Burrell and Co., Howe House Nursery, Cambridge, being invincible. This exhibit covered one side of a table arranged across the building, and included many dozens of very beautiful flowers. The most striking varieties among them were Oriental, Rosalind, Atlas, Ella, Flambeau, Eunice, Grande Ronge (many very fine spikes), Archduchesse Marie, Ruth, and Baroness Burdett-Coutts. The trusses were very large and the individual blossoms very fine. Messrs. Harkness and Sons, Bedale, Yorkshire, were placed second.

#### DAHLIAS.

The principal class was one for forty-eight blooms of the show and fancy type of the flower, and in this there were five competitors. Mr. J. Walker, nurseryman, Thame, Oxon, was deservedly first with a very fine lot of flowers. These were large, well finished, of good colour, and set up in a neat and even manner. His best flowers were T. W. Girdlestone, Joseph Ashby, Maud Fellowes, James Cocker, Queen of Autumn, Shirley Hibberd, Victor (very fine), Chieftain (good colour), J. T. West (excellent), Mrs. David Saunders, Mrs. C. Noyes, S. Mortimer, Hercules, Buffalo Bill, and W. Powell. Mr. S. Mortimer, Farnham, was second, his flowers lacking the evenness which distinguished the premier display. In the class for thirty-six blooms, distinct, there were six entries. Mr. S. Mortimer was first with an even lot of flowers. Second honours fell to Mr. J. Walker, who followed the first prize lot very closely with large even flowers of good colour. For twenty-four blooms, distinct, there were three competitors. Mr. G. Humphries, nurseryman, Chippenham, was first with even, though smaller flowers. The best in his stand were Rev. J. Godday, Shirley Hibberd (very fine), Senator, James Stephens (fine colour), Earl of Ravensworth, and Mrs. J. Downie. Mr. J. T. West, Brentwood, was placed second with a neat lot of flowers. In a class for twelve blooms, distinct, Mr. G. Humphries was again first with a well-balanced lot of flowers. Buffalo Bill (very fine buff, striped vermillion), William Rawlings (fine form), Mrs. J. Downie, James Stephens, Arthur Rawlings, and R. T. Rawlings were among the best. A good second was found in Mr. J. R. Tranter, Henley-on-Thames. In the amateurs' and gardeners' classes the premier one was for twenty-four blooms (show and fancy), distinct. In this Mr. Thomas Hobbs, Easton House, St. Mark's Road, Easton, Bristol, was first out of four competitors with rather small flowers. Mr. R. Burgin, St. Neots, Hunts, was placed second with larger, but an uneven lot of blooms. There were only two competitors in the class for twelve blooms, distinct, the leading position being taken by Mr. E. Jefferies, Langley Burrell, Chippenham. The second place was taken by Mr. W. Wheeler, 53, Bill Street, Henley-on-Thames. In a small class for amateurs who grow their plants without professional aid there were eight competitors with six blooms. Mr. Thos. Hobbs was first with neat and beautifully finished flowers. The pompons were a very pleasing feature of the show, the charming little flowers when well set up making a delightful change to the heavier blooms arranged on boards. The principal class was one for twenty-four bunches, distinct, and arranged in triangular form, with ten blooms in each bunch. There were four competitors, the premier position being secured by Messrs. Keynes, Williams and Co., nurserymen, Salisbury, with a very charming selection. Mr. Chas. Turner, Slough, was second with smaller, yet lovely blooms, but not so well arranged. For twelve bunches, Messrs. J. Burrell and Co. were first with neatly-arranged and high-class flowers. Mr. J. T. West was second with smaller flowers, having Nellie Broomhead, Mary Kirk (a good yellow), and Bacchus. For six bunches, Mr. G. Wyatt was first with a fine lot, having Capt. Boyton and E. F. Jungker in

splendid condition, while Mr. J. Hudson was second with a pretty exhibit, having Mars i splendid colour. The single varieties were seen in exceptionally fine form in the first prize exhibit of twenty-four bunches. This came from Mr. T. W. Girdlestone, Sunningdale, Berks, and was a very beautiful, bright, even, and well-arranged lot of flowers. The second prize went to Mr. F. W. Seale, Vine Nurseries, Sevenoaks, with less even flowers and also less beauty in their setting up. Eclipse, Formosa, Miss Jefferies, W. C. Harvey, and Beauty's Eye were his best bunches. For twelve bunches, Mr. E. F. Such was first. Mr. J. Hudson, Gunnersbury House, Acton, W. was second with smaller, but pretty flowers.

The decorative, including Cactus, varieties were in themselves the most distinct feature of the show, and were an object of interest to most of the visitors. Great improvement seems to be seen each season. The true Cactus form seems to be the essential, and on this account several strongly grown flowers having lost some of the chief characteristics regarding form had to give place to those of truer form. The chief class for this type of the flower was for eighteen bunches, distinct, six blooms in a bunch. Messrs. J. Burrell and Co. were first with a grand lot of flowers of medium size and good form; Starfish, Lady Penzance, Mrs. A. Beck, Falka, Mrs. Francis Fel Cinderella, Casilda, Mrs. Wilson, Noble, Fantasy Harmony and Cycle were the best. Messrs. Keynes, Williams and Co. were second. There were six competitors in the class for twelve bunches, and these made a most striking array of colour. Mr. J. T. West was first with flowers of exquisite form and a pleasing assortment of colour. The second prize was awarded to Mr. Stredwick, Silverhill, St. Leonards-on-Sea, for heavier lot of blooms. Quite a strong competition was seen in the amateurs' and gardeners' class, for six bunches, the premier award going to Mr. G. Wyatt, with small flowers and, with one exception, good form. To several exhibitors this was a great surprise, as the disappointed ones had flowers showing high culture at the expense of form.

#### MISCELLANEOUS EXHIBITS.

These were large and varied, and assisted materially to make a fine show. Mr. H. J. Jones, Rycroft Nursery, Lewisham, S.E., well merited the silver-gilt medal for a charming group. The centre were early Chrysanthemums and Liliu speciosum album artistically arranged, and each end of the group and finished off to a point were fine tuberous-rooted Begonias, both double and single forms. The whole was pleasingly finished off with Palms and edged with Ferns, & Mr. T. S. Ware had a large group of cut Dahlia of all types arranged on the floor, a central cone of large size being composed of the Cactus flower with smaller cones at each of the four corners made up of the pretty pompon flowers. This also received a silver-gilt medal. Mr. Norman Davy, The Vineries, Framfield, Sussex, had a large table of Chrysanthemums, interspersed with flowers of the perennial Aster. A vase of Chrysanthemum Queen of the Earlies and one of Barba Forbes, each excellent early white sorts, were much admired (silver medal). Mr. W. Webb, Earlswood Nursery, Redhill, had a small table of early Chrysanthemums (silver medal). A grand group of Chrysanthemums associated with fine-foliaged plants came from Mr. J. H. Witt, Nunhead Cemetery, and this was awarded silver-gilt medal. Messrs. H. Cannell and Son, Swanley, for cut Chrysanthemums and a nice lot of Saintpaulia ionantha in 5-inch pots; Mr. E. F. Such for a collection of hardy flowers at Dahlias; Mr. J. R. Clard for a large table of decorative exhibits, including some of his most recent designs, and Mr. Seale for a large table of Dahlias in vases and on boards; each received silver medal. Messrs. S. Spooner and Son, nurserymen, Hounslow, had a large table of Apples and Pears set up in baskets and on dishes, for which a silver-gilt medal was awarded. From Reid's Nursery, Sydenham, came Cannas, which a bronze medal was given.

# THE GARDEN.

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## ORCHIDS.

### DENDROBIUM DEAREI.

These and pretty blossoms of this *Dendrobium* are produced at this season with great abundance, and doubtless this has in a measure increased its popularity. Few species are more suited for cutting, even among the spring-flowering deciduous kinds, and the fact that orchids are now at their best is an additional recommendation. I have been in places where this species grows like a weed, though no particular attention seemed to have been paid to it, while in others it is more or less a failure. As a rule it is most satisfactory in places where a large batch is cultivated, as here it can be given just the right position and treatment, and here a few plants only are mixed with other orchids it is more difficult to do. It comes from the Philippine Islands, consequently plenty of heat must be allowed, and I have always found it do best in a house laden with atmospheric moisture the greater part of the year. The growth, it will be noted, is short, and all such plants take longer to make than those with longer internodes and fewer leaves. Get them into growth then as early as possible in the season, and see that from the time the buds start till the terminal ones are finished no check of any kind is given to the plants. They may be checked in various ways—by neglecting the ventilation or by syringing in spring when cold winds are often blowing at the time the sun is bright, by the presence of insects about the young tender plants, or by sudden fluctuations either of heat or moisture. All this should be carefully guarded against, and after the growth is fully ripened it must be well ripened by exposure to an all air. It is quite a mistake to think that the blossoms are over, the growth therefore should not be ripened. Each pseudo-bulb has to play in the economy of the plant, and its work is only half done when the flowers are over. A well consolidated plant rests during

the winter and starts strongly in spring, but one with green, half-ripened bulbs is never satisfactory. *D. Dearei* should never be unduly dried while at rest; the roots and compost may get quite dry before giving a fresh supply of water, but they must not be allowed to remain long in this condition. If properly potted, it takes water almost daily when both root and top-growth is active. The young shoots begin to emit roots when about 3 inches in length, and if the compost is in need of renewal, this is the safest time to set about it. Nothing is gained by using large pots or baskets, for the roots, though rather freely produced and fairly vigorous, do not seem ambitious in leaving the centre of growth, like those of *D. nobile* and similar kinds. Nice specimens may be grown in pans about 5 inches or 6 inches across; in fact, if the receptacle used allows of a margin of compost about 1½ inches wide all round the plant, it is ample. For potting *D. Dearei* I use about three parts of Sphagnum Moss to one of the best fibrous peat rid of all sand and earth, adding plenty of rough crocks and charcoal, and draining the pans well. Should any of the plants be badly rooted, and consequently difficult to fix in position, a thin copper wire may be run over the convex surface of the compost, catching the rhizome between two of the older pseudo-bulbs, this serving to hold it steady until new roots are emitted, when it may be removed. If sufficient moisture can be otherwise maintained in the atmosphere, syringing overhead is unnecessary, but it will do no harm if judiciously managed, and is sometimes helpful during very hot, bright weather in summer. The most risky time is when the shoots are small and tender, but it is not then needed. The plant is named in compliment to its discoverer, Colonel Deare, who found it in Dinagat about the year 1882.

**Peristeria elata.**—Of this I noted a large plant last week carrying a spike considerably over a yard in length, the upper portion for more than a foot bearing the pure white, sweetly-

scented blossoms. The column and lip bear a strong resemblance to a white dove; hence its popular name of Dove Orchid. *P. elata* is a strong-growing, semi-terrestrial plant, thriving well in large well-drained pots, the compost consisting of equal parts of peat, loam fibre, and Sphagnum Moss. Plenty of crocks and charcoal must be added, the plants grown strongly till they flower and afterwards rested.—H.R.

**Stanhopea guttulata.**—This belongs to the same set as *Stanhopea oculata* and *S. Wardii*, and is a variable and beautiful plant. The flowers are large, the sepals and petals pale yellow, closely covered with large, light purple spots, the lip nearly pure white, with smaller dots of purple. *S. guttulata* does well in any warm, moist house if grown in fairly large baskets suspended from the roof, kept moist at the roots, and regularly syringed overhead twice daily in hot weather. The best compost is equal parts of thereabout of Moss and charcoal, with a little loam fibre over good drainage.

**Trichopilia tortilis.**—This pretty species is still in good condition, the well-known blossoms with their singular twisted segments being very attractive and fragrant. It does well in a shady, moist position in the Cattleya house, and though liking abundant moisture while growing freely, may easily be over-watered during winter. The roots are not very strong or any too freely produced, so care is needed to keep the compost clean and open, so as to ensure ample aëration right through the ball. Where duly shaded, the closer they are to the glass the better, but they cannot stand direct sunlight. *T. tortilis* is a native of Mexico, whence it was introduced in 1835.

**Oncidium leucochilum.**—This is an old species, but a very beautiful one, the long arching spikes of flower having a fine appearance just now. Each bloom is about 2 inches across, pale yellow on the sepals and petals, which are blotched with chestnut-brown. The lip is similar, or lighter in colour, with a reddish centre. It is an easily-grown, vigorous plant, thriving well in quite a cool house during the summer months, and in winter a minimum temperature of 50° is ample. The roots are strong, thriving well in a compost of medium thickness consisting of equal

parts of peat and Moss. It likes plenty of water while growing, and must never, in fact, be dried off. It is a native of Mexico and was introduced in 1835.

**Dendrobium canaliculatum.**—This Dendrobe is not so frequently seen as it deserves, for it is a distinct and pretty plant. The stems are much more thickened than most others of the Australian section of the genus. These bear a few pairs of leaves towards the top whence spring the stout erect spikes of bloom. These are about a foot high as a rule, the flowers occurring chiefly towards the top in a loose raceme. The outer segments are rather narrow, white at the base, becoming yellow at the tips, the lip being white with a very deep purple blotch in the centre. The plants require plenty of heat and atmospheric moisture while growing, but the roots are easily damaged by either a too free supply or too much material about them. The pots or pans used should allow a margin of 2 inches round the plant, and the compost must be made very firm. The most suitable time to repot is when young growths are starting before they begin to root. *D. canaliculatum* comes from almost the extreme point of North-east Australia, and was discovered by Mr. J. Gould Veitch in 1865.

**Cattleya Loddigesi.**—Flowers of the typical form of this plant come from a correspondent for a name. It is a pretty plant that is worthy of more care than present-day Orchid growers give to it. The flowers occur several together on an erect scape at the apex of the newly-formed pseudo-bulbs; they are about 4 inches across, the sepals and petals a delicate rosy-lilac, the lip deeper in colour with an orange blotch in the centre. Its culture is not difficult, being practically the same as for most of the upright growing, autumn-flowering *Cattleyas*. A position not too far from the roof glass suits it best. The plant may be repotted in March or April, using a compost of rough peat and Sphagnum with plenty of charcoal and crocks. Old specimens are apt to become bare in the centre, and when this occurs they ought to be broken up and the young plants either re-massed or set growing separately. In any case let the leads be kept as near the centre of the pot as possible and use the latter of medium size in accordance with that of the plant. Keep the growth dormant during winter if possible and only give sufficient water to prevent shrivelling of the pseudo-bulbs. It is an old plant in collections and a native of Brazil.

#### PHALÆNOPSIS VIOLACEA.

THERE are a great many varieties of this pretty Moth Orchid, differing more or less in the intensity and distribution of the colouring, but every one is a handsome and beautiful plant. In the typical form the blossoms are about 3 inches across, white, prettily marked at the base of the segments and lip with violet-purple. They occur on stoutish scapes, about four or five on each, and these are not as a rule open together. The habit of the plant is dwarf, the leaves deep shining green, about 6 inches in length. It is not more difficult to grow than others in the genus, and may be cultivated in pots, small pans, or wooden baskets suspended from the roof. The growing season is usually from February or March till September, and during this time a hot, moist, and carefully shaded house suits it best. Shading is an important point in its culture, for though it cannot be denied that growing naturally the plants are exposed to almost direct sunlight, this will not do under cultivation. On the other hand, for obvious reasons, too heavy and long-continued shade is not advisable. Enough light to properly consolidate the leafy system of the plant must be allowed or the foliage gets weak and thin, falling off wholesale in spring when the plant begins to get active. Air in abundance the plant likes, provided it can reach it at a proper temperature, but to open the ventilators when cold winds are blowing is simply ruinous. Better by far keep close then and allow more air when the weather is more propitious. Keep the temperature as

regular as possible, and avoid a dry atmosphere at all times. The foliage dislikes heavy syringing overhead; it is unnecessary if the atmosphere is right. The treatment of the roots is simple. The more they can be induced to break up and ramify in broken crocks or similar material the easier they are to transplant, and this has led me in many cases to remove Phalænopsids of various kinds from the cylinder-shaped receptacles often used for them and place them in pots of ordinary make. The roots are exceptionally impatient of anything close or sour about them, cleanliness being one of the important points in its culture. Pots or pans should be clean and dry when used, and the sphagnum about the roots should have all foreign matter removed before using. A winter temperature of 60° by night is high enough, and the day temperature at this time must not be too exciting. A proper annual routine of growth and rest is thus kept up, the plants blooming freely every season. *P. violacea* is a native of Sumatra, and was first discovered in 1859. It has, however, only been in general cultivation since 1878, when it flowered in a Cornish collection. R.

**Masdevallia ephippium.**—This is a singular and interesting species, but not so showy as some other kinds. The flowers are very freely produced, one or two on a scape. The upper sepal is the smaller, being narrow, yellow, stained with brown, the lower ones forming together a cup-shaped process enfolding the column and petals, chestnut or reddish brown at the base, becoming yellow at the end of the tails. Few species are better off for names than this, but the above is the one generally recognised. It is a native of New Grenada, whence it was sent home in 1874, and it has been collected in various localities by different people since. Reichenbach took the specific name from a Greek word, meaning a saddle, but where the likeness to this comes in, it would be difficult to say. *M. ephippium* does not always thrive under cultivation, but, as a rule, it will be satisfactory if kept slightly warmer than the *Harryana* set during winter, potted up in clean Sphagnum and peat, and never dried at the root. The safest time to repot the plant is in autumn, when it has a chance of getting re-established before the winter. Remove all old and sour material from about the roots when repotting, and finish the line of compost a little above the pot. Yellow thrips are its worst insect enemy, and must be kept down by fumigating if needful.

**Promenæa stapelioides.**—This is a quaint, yet striking little Orchid, and I have noted it in flower in several collections recently. In habit it is similar to the other species in the genus, but usually rather smaller, the pseudo-bulbs only about 1 inch high and growing in close tufts. The flowers, usually produced singly on the spikes that spring from the base of the bulb, are each 1½ inches across, pale yellow, with bands of deep purple-brown. The lip is darker than the rest of the flower. Although this species comes from Brazil, its habitat is so high up on the Organ Mountains, that it likes much less heat than Brazilian Orchids generally. It may, in fact, be kept quite as cool as *Sophronitis*, and will be all the better for it. In a shady, cool house of any kind it will thrive if carefully attended to. Perhaps its roots are the most impatient of any respecting closeness in the compost, and for this reason the plants need frequent renewals of the latter. They must not be top-dressed time after time without repotting, as this tends to thicken the bulk of the compost, and thus defeat the end in view. A thin layer of good peat Moss and fibrous loam suits this plant well, and from the time growth starts until the bulbs are made up the roots must not suffer from want of water. Insects are fond of the tender foliage, and these must be kept in check by sponging.—H.

**Phaius Humbloti.**—There is something very singular about the constitution of this beautiful Phaius; in some places it grows very freely, in others even skilled cultivators fail to do much

with it. I am of opinion that not only this many other Orchids vary in robustness and in the individual plants even when apparent as strong and healthy as each other. All events it is not unusual to see plants under exactly the same cultural conditions varying greatly in the progress they are making. Cleanliness very important factor in its well-being, while the term is applied to the plant itself or the post and receptacle in which it is grown. A step in fact in bringing unhealthy plants to root would be a thorough washing of every part root and bulb, repotting into fresh compost. Being a native of Madagascar, it natural quires warmth, but possibly it has been kept hot by many growers in the past. I know least one case where a lowering of the temperature has led to better results, while a nice lot of plants I noted during the week was in the airiest part of a large *Cattleya* and blooming freely. It is very attractive in flower, much more so than the majority of species. The spikes rise to about 18 inches high bear seven or eight flowers each. These individually, are 2 inches across; the sepals petals white, with a rosy-purple suffusion, the a pretty shade of brownish-crimson. The commemorates its discoverer, M. Leon Hur who sent it home with other species in 1879. L.

#### NOTES ON ORCHIDS.

THE weather of the past few weeks has been unsuitable for Orchids, and it has been necessary to use much more fire-heat than usual in the houses. The grower's first care now, of course will be the consolidation of the growth made during the past summer. Most of the deciduous *Dendrobiums* have by now finished growing and are hanging in the full light with the above in view. *D. Macarthiae* has made good growth with me this season and the terminal leaf just appearing, *D. superbum* and one or two being in a similar condition. These will ripen in the warmest house for some time longer is a great mistake to turn them out before they are really finished. This treatment tends to produce and badly-formed flowers, also subsequent growths. The evergreen kinds have been irregular this year, but as the growths of one are made up in a much shorter time than noted above, it does not so much matter if they are a little later. *D. chrysotoxum* and the very snavissimum are now just starting. Newly imported plants of *D. formosum* are grown freely, so are others of *D. Phalænopsis*, *D. F. anum*, *D. bigibbum* and *D. Dearei*—a mixed lot of plants this, but just now they grow wonderfully well together. *Calanthes* are green, and I give these liberal moisture to the root, with now and then a weak application of manure. *Thunias* that have ripened up should by now be under cover, as the night much too cold for them, and as soon as a foliage is off they may be shaken clear of the post and hung up in a warm house for the winter. Late plants and stems that have not bloomed care, or they keep growing too late in the season ripen properly, and such stems never produce good flowering shoots in the spring. In the houses are apt to become covered with dirt or other deposits, owing to the proximity of the stovehole, these must be kept washed off and it is imperative that all the light at command be given to the plants now. Especially is this the case with *Phalænopsids* are grown, for though it is necessary even now to lower the blinds for a while on bright days, they want all the light before this and afterwards. It is too early to reduce the moisture much to these beautiful plants, but a slight difference may be made in the atmosphere. The leaves, especially those of the *Schilleriana* group, show by their appearance when the season's growth is drawing to a close. In the *Cattleya* house *C. Gaskelliana* is flowering, some late plants even yet just showing the buds through the sheath. *C. halimifolia* will soon be the attraction, and

beautiful Dowiana varieties are also forward. *C. uttata* Leopoldi with its olive and crimson tints is just opening, and *C. bicolor*, a quaint and pretty species, will follow it closely. Keep *Laelia purpurata*, *L. grandis tenebrosa*, and *Cattleya Illinoensis* at rest now if possible, also the summer-blooming kinds that flower upon the young plants. *Cattleya Mossiae* is pulling up, but needs warmer, or at all events brighter, weather in time, while *C. Trianae* and *C. Percivaliana* resting in sheath. These fine kinds have the end of the season to grow in, but in the neighborhood of large towns where fogs are injurious throughout seasons for flowering. *Oncidium lanceanum* is an erratic subject, but if the growth can be arrested now that the new fleshy leaves have formed and grown to full size, there is no doubt they start away better for a rest, if only for a few months' duration. Other kinds, as *Orchidanthus* and *roseum*, *O. Cavendishianum*, *O. luridum*, may be treated similarly. None of them like severe drying, but neither are they satisfactory if kept sluggishly growing throughout the year. The cooler section of the genus, such as *O. macranthum* and its varieties, and the dwarf kinds, as *O. concolor* and *oculatum*, are in many cases pushing new roots from the forming pseudo-bulbs, and if the compost is in need of renewal this may be safely carried out now. Many of the *Odontoglossums*, *Masdevallias*, *Phorolithals*, and *Restrepias* may also be looked to. None of these like a thick spongy mass of compost. They delight in one that quickly runs and drains, and has plenty of capacity for retention. The first-named delight in deep pots in rough open material, where the large fleshy roots thrive and ramify freely, but all the dwarf kinds are best with less. The *Schlieperianum* and similar types of *Odontoglossum* are coming really forward, and great care is necessary that the spikes are not eaten by slugs. These pests are more troublesome in the cool house than anywhere else, and this section of the popular genus seems especially to their taste. Disas, too, may not be repotted, the root-stocks being carefully halved or the tiny shoots will be broken off. They will soon again be in growth, and when this occurs a very liberal supply of moisture both in the atmosphere and at the roots must be given. Cool species in pits and frames must be well covered at night, and after the end of the month should be, if convenient, placed in their winter quarters. No drop in the temperature in any of the houses is advisable as yet. R.

BOOKS.

OPEN-AIR STUDIES IN BOTANY.\*

"Come forth into the light of things,  
Let Nature be your teacher."—Wordsworth.

A neat, well-printed, and most interesting little book of 266 pages, with glossary and index, sixty or seventy original illustrations, and seven photographic reproductions of wild plants as naturally growing in their homes. As the author tells us in his preface, this work is

an attempt to exhibit, by means of familiar scenes in our own islands, glimpses of plant life; interpreted not by the examining of microscopic slides in the laboratory, nor yet by the "conning of plant-mummies" in the herbarium, but by the study of actual scenes from Nature. We stand, in fancy, out in the open country, with the wild flowers at our feet, the hum of insects and the rustling of the wind in the pines, and the blue sky overhead, and we use those powers of observation that have been given to us. This is only what we hope to comprehend the life of a plant or of a plant-community, and appreciate the conditions under which each species lives, and the adaptations by which each is able to maintain its

"Open-Air Studies in Botany: Sketches of British Wild Flowers in their Homes." By R. Lloyd Praeger, B.Sc., M.R.I.A. Illustrated by drawings from Nature by S. Rosamond Praeger, and photographs from Nature by R. Welsh. London: Chas. Griffin and Co., Exeter Street, Strand, W.C. 1897.

position in the plant world and fulfil its proper functions.

And we must honestly say that this simple little programme has been well carried out, and it is just the book to interest and encourage those who are fond of our native wildings and do not know much about them.

There are eleven chapters, or "scenes" as the author prefers to call them, representing so many of the peculiar habits generally resorted to by the special plants included under each head. Thus we have A Daisy Starred Meadow—Under the Hawthorns—By the River—Along the Shingle—A Fragrant Hedgerow—A Connemara Bog—Where the Samphire Grows—A Flowery Meadow—Among the Corn—A Study in Weeds—In the Home of the Alpines, and finally a city rubbish heap with its vagrant population is described. The book is by no means a complete flora, but aims at the illustration of our most popular native flowers in a gossiping or familiar manner. In treating of the flowers themselves opportunity is taken to "point a moral and adorn a tale" by pleasant glimpses at the underlying principles of classification, distribution, and movements of plants, as also to those now familiar biological questions of "the struggle for existence" and "the survival of the fittest," &c.

The book is rendered much easier for reference by the particular generic and specific names and other important words being printed in a larger and darker type, though the ordinary body type is also bold and clear. Thus, under colours of flowers the work of Grant Allen is mentioned, and under Orchids there are references to the works of Darwin on cross-fertilisation, and elsewhere the works of Kerner, Müller, Johns, Bentham, Hooker, More and Moore, Babbington, &c., are named, so as to facilitate the studies of those who care for further information.

The book is mainly written from an Irish flora point of view, but will on that very account be more acceptable to many other British readers. The rare and peculiar Irish Orchid, *Spiranthes Romanzoviana*, is figured on the title-page as growing in grass, but, as it seems to me, *minus* its own leaves, and mention is made of the peculiar fact that this delicious almond-scented little flower is found nowhere else in Europe except in three or four Irish localities, but crops up in New York State, and is found at intervals between that place and San Francisco. It is a little disappointing to find the dainty little Fairy Hyacinth (or *Scilla verna*) ignored, though the Wood Hyacinth, or *Bluebell*, is alluded to as *Scilla vestalis* several times; but no doubt Mr. Lloyd Praeger thought it would not be likely to intrude itself upon the majority of those who read his book. Again, very little, except a bare mention, is made of that queen among all British wild flowers, the Lily of the Valley, which makes the woods near Coniston and elsewhere in the English Lake district so fragrant and delightful during May and June every year. We quote *Convallaria majalis* here, as being one of our most exquisite wild flowers, and one to which the botanist has rarely, if ever, done justice. Will it be believed that there is no portrait of it in the *Botanical Magazine*? At the hands of the gardeners and of the general public, however, it has met with due culture and appreciative admiration, and thousands of pounds are paid annually for its roots or "crowns" for forcing, as grown near Berlin, Hamburg, and other German towns. It is also largely grown in France and Belgium, and there are florists, like Jannoeh and Rochford in England, who can now supply its exquisite leafage and pearly bells for at least ten months out of the twelve. This is done by a very clever application of chemistry and physics, a steam engine working a refrigerating apparatus in a cold chamber, where the "crowns" are preserved dormant until required. This is merely one instance out of many in which our native flowers are now attaining to a profitable importance, but little, if anything, less than that of many exotic ones. We have no means of knowing the total sum derived

from the sale of Lily of the Valley flowers in England, but it must be something enormous.

To return to the charming book before us, we may say that it relates to wild flowers only—as its title indicates—nothing being said of the Ferns, Mosses, or fungi, nor do we find any reference to the enormous quantity of Blackberry fruits now gathered in Ireland and shipped to England every year, but as another edition is sure to be soon called for, we would suggest that it should contain a short chapter on the economic and medicinal uses of wild flowers and plants, in the efficacy of which the Irish peasantry to this day so thoroughly believe. Twenty years ago only a very few "hot-house" flowers were seen in a very few of the best shops in Dublin, but to-day flowers are met with everywhere, and there is, moreover, quite a profitable trade established in wild flowers throughout the Dublin streets every spring, when the flower girls and basket women hawk about Primroses, May Blobs or Kingcups, Buttercups, Oxeye Daisies, &c. Later in the year the Blackheads, or Banshee Rods (Typha), and great clusters of golden Corn Marigold and fresh masses of purple Heather appear, while "Holly and Ivy" brings the season to a close on Christmas Eve.

Both author and publisher are to be congratulated on the production of a work as fresh in many ways as the flowers themselves of which it treats, and the reader may feel quite satisfied that the rich store of information the book contains is quite up to date and reliable.

F. W. BURBIDGE.

ROSE GARDEN.

ROSES FROM CUTTINGS.

By the time these lines are in print the preparations for obtaining a quantity of own-root Roses should be commenced. Before explaining the *modus operandi* it will perhaps be as well to consider the advantages of own-root Roses over those that are budded or grafted. These advantages consist of (1) immunity from destruction by frost, (2) absence of suckers, (3) continuity of flowering, (4) greater longevity, (5) economy. Considering these five points in the order given, doubtless the first one is of great moment to most individuals. It is very disappointing, not to say disheartening, to see our favourites totally killed by frost, which during recent years has been so severe. Although we can be tolerably safe with budded dwarf plants if moulding up with earth is resorted to, yet there are times when we are caught napping, the ground being too hard to carry out our intentions, and, consequently, our plants are almost, if not quite, crippled beyond recovery. The Manetti stock is very tender. I have seen it killed outright at the root whilst the plant budded upon this stock was scarcely touched. Of course, one remedy for this would be to use the seedling Brier as a stock, but this is not obtainable everywhere, and unless we can be certain of having plants on the Brier, then I say most decidedly own-root plants are the best. If the cuttings are properly made there will be a continuous throwing up of suckers, but we have the satisfaction of knowing that these suckers are also part of the Rose plant. Then again, we have no suckers to cut away. I was surprised to see quite recently in a first-class private garden huge bushes of the Manetti stock growing amongst the Roses. I think had they been mine I would have budded on to them some good popular kinds or cleared them out. Three or four years ago I was looking over some beds of Roses, and could have cut away almost a barrow-load of wild suckers of the *De la Grifferaie* stock upon which had been budded many of the Teas. Now this is not a satisfactory state of things. Perhaps it will be said that no good gardener would allow suckers to remain on the bushes, but it is not always convenient to search for them, and Roses are often planted in positions where to a certain extent they are not always

under our eye. In the third place we have by planting these own-root Roses a better succession of blossoms. This applies chiefly to the Hybrid Perpetuals, because we all know how perpetual the Tea-scented and allied classes are. But with the Hybrids on the Manetti stock, when the first flush of flowers is over there is a great dearth of blossom for several weeks; but with own-root plants this is not the case. Even before a shoot has developed its blossoms another sucker-like growth is making its way upward, to be finally crowned with a grand head of flowers.

Seldom do we find in gardening perfect union of bud or graft and stock. To show that such is the case, even the production of fruit trees upon own roots is freely spoken of amongst professionals, and there is no doubt in the case of Apricots, Peaches, &c., a more healthy class of plant would be the result if the plan could be successfully adopted. As regards Roses budded on the Manetti, let anyone dig up a plant after being planted three or four years, and he will generally find a mass of roots springing from the Rose plant at the junction of bud and stock. This proves that Roses have a natural inclination to make roots, and it certainly is more in accordance with Nature's methods. Were it not for this rooting from the bud, Roses on the Manetti would be very short-lived. On the contrary, own-root plants practically never wear out. We see this in some of the grand specimens of climbers in old gardens. For these climbers, pillar Roses, hedge Roses, shrubby Roses, cemetery Roses, and indeed everywhere where one wishes to treat them as shrubs, own-root plants are decidedly preferable. Then on account of the greater economy of own-root plants I recommend them. If well-rooted plants are carefully put out in good fibrous soil, they quickly overtake their budded brethren, although at first they have poor puny tops compared to theirs. In grouping Roses one does not want to be constantly filling up vacancies, and this we are bound to do if budded plants are employed. There is a saving both in the plants required and in the time occupied in attending to their requirements, also in their production. Good own-root plants may be obtained in twelve months, whereas twenty-four months from the planting of the stocks are necessary to produce budded plants.

Having said this much in favour of own-root Roses, perhaps a few hints as to

#### STRIKING CUTTINGS

will be helpful at this season of the year. I do not advise trying to strike the Tea Roses in autumn. This is best done in July under hand-lights in a very sandy soil. What I recommend putting in now are the Hybrid Perpetuals, some of the Hybrid Teas, Bourbons, Chinas, Hybrid Chinese, Ayrshire and Evergreen, &c. The Gallicas, Mosses, Damasks, Albas and other summer Roses are best rooted from layers put down in July.

The plot selected should be out in the open in full sunlight. Trench the ground at once and work in some good decayed manure and road scrapings. The advantages of trenching are very manifest in a season like we have had this year. Let the land lie for two or three weeks, then it will be ready to receive the cuttings. If a heel can be taken with the cutting, it is a very good practice. These cuttings should be about 6 inches long. The most suitable wood is that which flowered first this season, cut off level at an eye with a sharp knife. Leave the top leaves on and lay the cuttings in the shade in some old fibre until the ground is ready for them. They must not lie about long, because as soon as calused they emit roots, which break off quickly if rubbed ever so slightly. When planting take out a small trench and cut down the soil with a spade, so as to form, as it were, a wall of soil. Place a small quantity of a mixture of old cocoa-nut fibre, sand, wood ashes and pot-mould in the row, and stand the cuttings about 4 inches apart on to this compost, and slightly lean them against this wall of earth. Only just the point of the cutting should appear above ground. Then dig up some soil and give a fair treading to firm the

cutting; then another row about 12 inches from the first one may be prepared in a like manner. Nothing further will be necessary until sharp frosts threaten; then, if possible, cover over all the surface with a layer of leaves or light litter. If the frost draws up the cutting, it must be pushed down again when a thaw takes place, and a favourable opportunity must be seized when the soil is dry to tread the cuttings up firmly. If kept thoroughly clean, the following summer some fine plants will be produced. These should be removed early in October to their permanent quarters. Lift them very carefully, and when re-planting put a half peck of good soil around the fine fibrous roots. I would not recommend putting in cuttings of delicate miffy growers such as Louis van Houtte, Horace Vernet, Xavier Olibo and such like, but varieties of the style of Charles Lefebvre, La France, Baroness Rothschild, John Hopper, Mrs. John Laing, Captain Hayward, &c., strike most freely. To ensure success, put cuttings in early. W. E.

**Rose Duke of Albany.**—The flowers of this are of a rich scarlet-crimson-rose. It is exceptionally valuable as an autumn flowering variety, the colour at this time of the year being very brilliant. The flowers when fully expanded are richly shaded with blackish maroon. It would surely be very valuable to exhibitors, because it is not one of those "catch" varieties that only give one good flower in a season. It is a good grower, not extra vigorous, but quite strong enough. Perhaps it is most suitable as a bush, although it makes a fairly good head on standards. It is a fragrant variety, having very spiny wood and bright pea-green foliage.

**Rose G. Nabonnand.**—It is at this season of the year that the loose, informal Roses are seen in greatest perfection. Although we admire the stately beauty of Maman Cochet, Souvenir d'Elise Vardon, and such like varieties, we are compelled to admit that it is such kinds as G. Nabonnand that best beautify our gardens and houses. This Rose is beautiful in bud; it is doubly so when expanded; then its immense shell-like petals of a soft rosy apricot colour are lovely. It is a splendid grower, making each season a quantity of strong growths of a deep purplish colour—an admirable contrast to the blossoms.

**Rose Mme. Fanny de Forest.**—This Noisette Perpetual is a grand white Rose for pot work. When its numerous blossoms are fully expanded it makes one of the most attractive plants in a collection. Under glass the flowers remain upon the plant a considerable time, and before any of them show signs of decay the whole corymb of buds has expanded, producing a most striking effect resembling that of a huge snow-ball. The flowers are large for this class of Rose, quite as large again as in Boule de Neige, and they are of a very pure white indoors, but outside there is seen a faint tinge of pink. It is a good grower, making solid, rather stiff shoots, but not of the rampant nature of Boule de Neige. As a standard or a bush it is equally useful.

**Rose Kronprinzessin Victoria.**—It seems a pity that raisers of new Roses elect to bestow such outrageous names as the above upon their novelties. If our German and French friends desire to honour their Roses by giving them the names of members of their Royal houses, surely they would not object if our countrymen anglicised them, and thus rendered them more euphonious to our ears. Although this lovely Rose sported from the old Souvenir de la Malmaison some few years ago, it still remains almost unknown, and I believe the name given to it has hindered it gaining popularity. The flowers are very clear and beautiful, of a milky-white colour suffused with sulphur-yellow, flat in form, but very pretty. In all other respects it resembles its parent.

**Mildew on Roses.**—Will you or some of your readers tell me how best to get rid of mildew on my Roses? I read in Dean Hole's book about Roses that "Mr. Rivers recommends soot as a

remedy," and he gives the following quota from Mr. Rivers' letter: "Have you mildew try soot. . . . Perry" (his foreman) "tried sulphur without end, and at last in desperation smothered them with soot in the dew of the morning. This rested on them for four or five days, and was then washed off. The effect was marvellous; the mildew disappeared, the leaves turned to dark green, the buds opened freely, and the flowers were brilliant." So in the "evening of the morning" I tried soot, and the effect was certainly "marvellous," for although rain came the following night and washed off the soot, it killed all the foliage, which was blighted.—AMATEUR.

**Rose Mme. Alfred de Rougemont** is an excellent variety that should be in every garden where good decorative kinds are prized. The whole of these Noisette and Bourbon Perpetuals are well worth growing. They are so useful for cutting, and although they lack the refinement of their rivals, the Teas and Hybrid Teas, they nevertheless have the merit of being quite hard and most of them make capital town Roses. What conduces to the particular attractiveness of the Rose under notice is the exquisite carmine tinted buds, contrasting so prettily with the pinkish white expanded flowers. The blossoms are produced in real Noisette style. The beauty of this Rose, and, indeed, of all the trilled most revealed when trained in pyramidal form and very sparingly pruned. By isolating them in sunny positions in good soil they are very cones of blossom the best part of the summer in autumn.

**Rose Rosette de la Legion d'Honneur (H.T.)**—This pretty climbing Rose must be very popular, albeit encumbered with a few names. Its very tiny buds are each about 1/2 inches deep and of exquisite shape, every one evenly arranged, bending outward at the point forming, as it were, a miniature trumpet. The colour of these buds is brilliant vermilion. They are of them backed up with their own foliage none of the prettiest button-holes possible. The expanded flowers are only semi-double, but are quite unique in their way, for the petals have a broad line of creamy yellow colour extending from the tip of each right down to base. The ground colour of these expanded flowers is a soft carmine, the base being suffused with yellow. The fine sprays of flowers are borne upon good vigorous shoots. It is one of those climbing Roses, such as Longwa Rambler, Gustave Regis, and others, that flower freely when grown as bushes. It will most certainly be in demand by florists when better known.

**Single Tea Roses.**—I was particularly pressed when at Kew last week with the beauty of a bed of Rosa indica var. diversifolia lovely, rich carmine-red single variety. The idea at once occurred to me, "Why not have a collection of autumnal single Roses?" In the autumn of the year, with its cool nights and days, is distinctly favourable to single flowered Raisers of Roses know full well that they obtain a very large percentage of single varieties, and I maintain that if some of the more beautiful single Teas were retained instead of being ruthlessly destroyed, as they are at present, a delightful feature would be added to the garden. The weakly that the opponents of June-flowering single varieties have been enabled to say of them is that they are too evanescent, but I think even this failing would diminish in autumn-flowering single Tea-scented varieties, if not entirely, at least to a very considerable extent. Some of these single Teas possess the most exquisitely formed buds, long and pointed, and it seems a pity that such lovely gems, so rich and pure in colour and so firm in growth and flowering, are not perpetuated in the adornment of our gardens in late summer and autumn. Hard by the variety noticed above would be seen in all its autumn glory the almost single cream-coloured Isabella Sprunt, and a better illustration could be found of the utility of a decorative point of view that a collection of single Tea Roses would produce.

STOVE AND GREENHOUSE.

LILIUM LONGIFLORUM HARRISI.

Proof were wanted of the beauty of the above Lily it is at once supplied in the accompanying illustration. This lovely form is not only the most useful and handsome of its race, but is also ree-flowering and easily grown. It is a Lily to one can mistake, for no other of the long-flowered or trumpet section is exactly like it or comparable with it. This one may be selected readily by experts in Lily culture from the bulbs alone. Indeed, many years ago, before the present final definition was attached to this kind, it was easy to select it from among the best, which were mostly of the typical kind in the original importations from Japan. The same characteristics are only now more fully developed

sometimes thrice the size of those sent from Japan, the best side of this Lily is brought out, and it is no surprise that a variety characterised by freedom of flowering wherever it is known should by culture that suits it to a nicety possess this in a still greater degree. It is no uncommon occurrence for the largest bulbs of this Lily, producing only five or six flowers from ordinary bulbs, to produce quite double that number from much larger bulbs. But to ensure retaining all its powers intact in this direction there should be no time lost in getting the bulbs into the soil the moment they arrive in this country. Indeed, it should be remembered always in this connection that a Lily grown in Bermuda and shipped to England has already had a much longer season out of the earth than is at all needful for any Lily; and of the long-flowered section this is

may be planted in pots from 5 inches to 7 inches across, that is to say, giving them the pot in which it is intended they should flower. In my experience, this is to be preferred to any subsequent repotting after growth is well advanced. With these importations the roots and stem growth are produced with singular rapidity, and in a few weeks the latter has made its appearance through some 6 inches of coal ashes, while the pots are also filled with roots. Usually these Lilies are in a sound, plump condition on arrival, and all that is needed is to free them from the rough sawdust or other material forming the packing prior to potting. Having no root fibres, a soil fairly moist without being in the least adhesive is best for potting, and to this no water need be given. Plant the bulbs quite firmly in a good sandy loam with which some bone meal has been



*Lilium longiflorum Harrisii.* From a photograph by Mr. F. Mason Good, Winchfield.

Since the culture of this Lily has been so much a feature in the Bermudas. In the typical *L. longiflorum* the base of the bulb is small, widening to the top, which is distinctly flat, while the scales of the scales are arranged in a slight depression. In the Lily now under notice, which is known generally as *L. longiflorum eximium*, the scales are of more uniform size throughout, while the bulb as a whole is so distinctly conical in shape that a glance will decide. The growth of the leaves is also distinct, and so also the arrangement of the flowers on the stem, as well as the aspect of the blossoms. The Bermuda-grown bulbs of *Harrisii*, however, are more vigorous than those of the same variety from Japan. But this does not alter or change the well-defined characteristics. By a system of culture that often produces bulbs twice and

especially true, seeing that in a greater or less degree these are closely akin to evergreen when left alone. It is this fact, indeed, and the readiness to start into fresh growth as soon as flowering is well past that cause the loss of this secondary growth, and often some injury to the bulbs. It was also this fact that gave rise to the theory, long since exploded, that this Lily flowered twice and sometimes thrice in a season. That it is a grand Lily for either pot work or the open ground there is no doubt whatever, but any bulbs intended for the latter if of Bermuda growth should not be planted out in the open till severe frosts are past.

The annual importations from Bermuda usually reach this country in September, and if possible should be potted without a moment's delay. According to the size of the bulbs, they

mixed, and plunge overhead 6 inches deep in a bed of coal ashes. Here they will be safe without water for at least three or four weeks, by which time the stems will be piercing through the plunging material. In the event of wet weather following the potting, the bed containing them should be covered with lights or sheets of corrugated iron to throw off the rain, examining from time to time so that the points do not come into contact with the iron. As soon as up a frame should be placed over them, or remove the pots to a rather deep pit where ample light and ventilation can be given. To leave the pots too long in the plunging bed is to tempt the roots to the surface, and sometimes the formation of stem-roots also, and these perishing by subsequent exposure cannot influence for good, to say the least. Do not place

them in the greenhouse too hurriedly, and when there endeavour to keep them scrupulously clean. Better anticipate green fly, and fumigate in advance, for once it gains a footing in the points of these Lilies it is most difficult, as well as expensive, to eradicate. E. J.

#### SOLANUM CAPSICASTRUM.

THIS useful plant is extensively grown for market, some growers keeping their plants under glass the whole season, while others stand them out in the open quite early. They are usually propagated from cuttings, though some growers depend on seedlings, which, if selected from a good stock, make good plants, but they do not always set their berries so freely as those from cuttings. Cuttings should be put in in January, or even earlier. They may be obtained by putting some plants into heat. All the berries should be taken off and the plants will soon start into growth. Short cuttings from the new growths root freely in a close pit where there is a good bottom-heat. To succeed with Solanums it is essential that they should be potted off as soon as sufficiently rooted, and they must not be checked in any way. During the earlier stages they may be grown on in heat, and later on they will do well in pits, or, as I have previously said, they may be placed out in the open, but should have a sheltered position. Plants grown from cuttings begin to flower early, but if kept well syringed it will prevent them setting berries, or if they do set their berries before the plants have made sufficient growth they must be taken off.

Solanums may be potted in good loam, with a liberal addition of well-rotted manure, and after the pots are well filled with roots, liquid manure may be used freely until the time for setting the berries. At this period the syringe must be withheld and a good circulation of air kept up. After the plants are well set with berries, manure may be used again, and the syringe must also be used freely, otherwise red spider and other insects will be troublesome. An early hatch which has been kept under glass throughout the season is now well covered with ripe berries. Although it is rather early, they come in very useful, and with careful attention the berries will hold on well up to Christmas, but if allowed to get too dry or given a great change in temperature, the berries may drop much sooner. H.

**Winter-blooming Carnations after flowering.**—How to treat these after blooming is a question frequently put by amateurs, and I have occasionally to reply to it, for the desire to have a few Carnations bloom during the winter appears to be keenly felt by a good number of amateur cultivators; yet I find that the "Carnation Manual," which is supposed to deal with the details of culture of every type of the Carnation, is absolutely silent on this point. There are full details as to the striking of cuttings and growing them on into size to flower, but details of treatment after flowering are wanting. Even the yearly calendar of operations is silent as to the treatment of plants after they have flowered for the first time. If the National Carnation Society at any time should bring out an edition of the work, a further chapter dealing with this particular point may be added with great advantage. Many amateurs who have no convenience for propagating by means of cuttings desire to grow on a plant for two or three seasons.—R. D.

**Summer treatment of Cyclamens.**—Cyclamens are a special feature at Carrow House. The old system of growing Cyclamens through the summer in frames behind north walls is fast dying out. In such a position good plants have been and still are grown, but in dull, rainy seasons the plants often go wrong, the leaves suddenly turning soft and the footstalks falling down. The plants do not dry often enough and many of the roots perish. When the frames stand in an open position, as at Carrow, shading of a light nature

can be given just when the plants need it, it being withheld in dull, sunless weather. Plenty of light then reaches the plants. I was rather surprised at the size of Mr. Jones's plants, as the seed was not sown till October, a rather late date, and the plants now occupy 6-inch pots and are from 9 inches to 1 foot in diameter, the foliage of many being beautifully marbled. Mr. Jones is opposed to the use of cow manure, though it is frequently recommended for Cyclamens, as he once had an extra good batch suddenly collapse, the leaves one by one withering. On examination he found a colony of small grubs had attacked the bulbs, these, in his opinion, being introduced with the cow manure. The latter he now excludes from the potting compost, and that its use is not imperative is proved by the fact that many gardeners grow splendid Cyclamens in loam, leaf-mould and grit alone, feeding cautiously when the pots are well filled with roots. In airing the plants when standing in frames through the summer months, care should be taken to avoid draught, as this soon causes the leaves to flag and often wither. As autumn approaches great judgment is needed in watering. Far better err on the dry side, although the happy medium is what should be aimed at. Weak farmyard liquid given about twice weekly is the best and safest stimulant for Cyclamens.—J. CRAWFORD.

#### HOUSING TREE CARNATIONS.

No time should now be lost in placing these under cover. The very heavy and continuous rainfall of late has done much to sodden the plants, and where these are grown in very large numbers and in large pots for market, it is well-nigh impossible to provide frame room accommodation for them all, or even to place lights temporarily over them. Indeed, there is a good deal of risk even in the latter, particularly when the weather is rough and boisterous, as it has been of late. In such a case it is not possible to provide any temporary structure, and the next best thing, or perhaps the best thing under all the circumstances, is to house the plants without further delay. Late-rooted batches have not made so much progress as usual under the great summer heat, but with moister weather and cooler nights considerable progress has been made, and the plants generally are therefore promising. Should the heavy rains continue and for various reasons the plants cannot be taken in-doors, it will be well to lay all the pots on their sides and so prevent the soil becoming unduly soddened. Few plants, taken all in all, are really more delicate in their rooting than these Carnations, and for this reason they are more likely to succumb to over-much water at the root, especially when a low temperature prevails. When the plants are again placed in the greenhouse, all the air possible should be given, and an endeavour made to get the plants thoroughly dry at the root. Indeed, no plant in my keeping will receive water at the root for at least a week, even though the weather be very hot, in which case a very fine spray from the syringe overhead will be given to ward off red spider. It will also be well, when removing any small weeds, to lightly prick over the surface soil so as not to disturb surface roots too much. This will also assist in drying up the soil, which for the time is the most important matter. It is a good plan always to cleanse every house before bringing in the plants. This in my case is done by fumigating with sulphur and a few hot cinders, well filling the house with a blue cloud, and so dispersing much that cannot be detected with the naked eye. The walls and bare places are also well washed with lime in which has been thoroughly incorporated a 4-inch potful of sul-

phur, first mixed to the consistency of thick mustard. Thoroughly working this into the brickwork serves as a deterrent in the future against all insect life. When the plants have become dry enough to permit of it, a good all round syringing of clear soot water will be found of service, as it is equally while the plants are in the open. Some growers at the time of housing give artificial manure as a top dressing, but I strongly advise keeping clear of all of them. A very small application may be tolerated in January or February, but certainly not before for plants that have been propagated within the present year. Clear rain water, or with a little soot occasionally added is all the plants will require to the end of the present year. After housing a very careful supervision must be maintained over the watering, for no plant will more quickly resent care less or indifference in these details. Where a good collection of Tree Carnations is grown, the most careful workman only should have to do with them, or, better still, the principal himself should personally attend to their wants in this respect at least. E. J.

#### FERNS.

##### PTERIS TREMULA.

THE ease with which this species may be grown and its hardiness, fine appearance, and lacin qualities render it one of the most useful Ferns in cultivation. It is one of the best for indoor decoration, and if slightly hardened before being used will last several weeks in good condition. *P. tremula* is perhaps the freest seedling Fern in existence, the back of the fronds on large plants being nearly covered with spores. The ripe fronds should be cut and shaken over a piece of white paper to collect the spores, which should be kept in a dry cool place until they are required, and the sooner they are sown the better. If a dam wall or stage in a fernery or stove is at command they may be sown on this, as they will germinate almost anywhere, or pans of crock and a little rough peat and loam may be prepared and placed in a shady, warm house. They must be kept regularly and constantly moist without sprinkling them heavily with water, as this is apt to swill many of the spores away. A green film over the surface is the first indication that germination has taken place. Soon after the tiny young leaves appear, when they may be pricked off in very small patches into pans or small pots. No amount of care will ensure all the plants coming true, and often Ferns of entirely different species will come up. *P. tremula* shows its distinctive characteristics very early, and as soon as the young crowns can be distinctly seen they may again be divided, this time pricking them off singly around the edge of small pots in a light and open description of compost. Though strictly a greenhouse species, they may be given more warmth now if it is desired to hurry them on, but keep in mind that the more air and less heat they get the longer the frond will last either in a cut state or on the plant. In any case growth is rapid, and they must never become pinched for root room until they have reached the size intended for use. Small plants in 3-inch pots are very useful for standing singly on the table or for grouping with flowering plants, and it is one of the advantages of this kind that a nicely furnished plant with a head a foot or more across may be grown in the size of pot mentioned. There is hardly any arrangement of plants that this Fern may not be used with, the light graceful stems standing

all up, lightening the effect of other plants, which lose nothing by contrast with them. The large flat epergnes in which flowers and fruit combined used to be arranged are not much used as formerly, but where they are used the cut fronds of this Fern set off the fruit admirably. There are also many cut-flower arrangements that are improved by its use in place of the popular Maiden-hair, which it surpasses in lasting qualities. It is also a capital kind for a planted-out fernery where there is plenty of room for its full development, but it is a mistake to plant it among dwarf kinds, as it soon overgrows its station

a widely distributed plant in Australasia, and was introduced in 1820. R.

ASPLENIUMS.

Those of the bulbiferum group are so readily increased from the bulbils, or young plants produced on the surface of the fronds, that there is little need to trouble about raising stock from spores; hence we get very few garden varieties from these. It is remarkable that nearly all the Aspleniums are more difficult to raise from spores than many other Ferns, but as many can only be propagated by this means, it is necessary to persevere. In the first place, they do not germi-

I have seen some distinct forms, and many intermediate between the two above named. In many instances it would be difficult to say to which they belong. *A. pteridooides* has also shown some variations, among which may be mentioned *A. Mayi*, a very distinct and beautiful variety with rather long, arching, pinnate fronds of a rich deep green. Among seedlings of this some prove true, while others vary, some showing some affinity to *A. Baptisti*. *A. Herbsti* is another distinct variety, the parentage being doubtful, though it shows some characteristics of *A. lucidum*; the broad pinnate fronds grow nearly erect, the pinnae are irregular in shape, some being deeply cut and others entire. It makes a most effective plant, and if it should come true from spores it will undoubtedly become a favourite Fern. There are few more useful Ferns than *A. lucidum*, but being difficult to raise and very slow in a young state, it is not likely to ever be over-plentiful.

There are very few crested Aspleniums, except those of our British Lady Fern. *A. Drumii* is an exception; this belongs to the *Baptisti* section. It has rather broad pinnae, each terminating with a flat, almost circular crest. Seedlings vary somewhat, but in its best form it is a very distinct variety. One great advantage of the Aspleniums is that when once established they keep in good character for a considerable time. H.

PARK AND WOODLAND.

THE CORSICAN PINE AT HOME.

The prospect held out to us of a visit to the Corsican Pine forests was a tempting one. We remembered a reply made by a *garde général* in Corsica to the directors of the exhibition of 1867: "Impossible to send you, as you ask, sections of the trunks of our tallest *Laricios*; our longest saws are shorter than the diameters of our great trees." Then there were the more recent impressions got from the accounts of travellers in Corsica, and eloquent descriptions, concluding with the inevitable advice to "make haste if we wished to see really ancient trees and forests in their natural state." An excursion to Corsica was planned in the spring of 1897, but for various reasons the original band was reduced to four. These found their way to Ajaccio under the guidance of a Corsican, by adoption if not by birth, M. Doumet-Adanson, who was so suddenly stricken by death after our return to France. In Ajaccio we were cordially welcomed by the Conservator of Forests, who gave us some valuable information on the present condition of the Pine forests. M. Mabaret also insisted upon planning out an itinerary for us, which enabled us to see the best examples of *Laricio* in the limited time allowed to us.

The majority of the Corsican Pine forests are very easily approached to-day, the department of Bridges and Highways having constructed some marvellous roads, but there are other forests situated in remote valleys which are still only to be reached by way of mule paths and goat tracks. In these the largest trees, even when decayed, are still left standing, as their removal cannot be economically effected; also isolated trees situated in the rockiest and least accessible places remain intact for the same reason. Our party, which included one person already advanced in age and in delicate health, was not equipped for journeying over mule paths and scaling goat tracks: the finest forests within our reach were, therefore, those of Aitone, Valdoniello, Vezzano, Marmano, and Bonifato, the four first being situated in the department of Corte, and the last in that of Calvi, and all being intersected by good roads.



The Corsican Pine at home. From a photograph by Mons. Maurice Vilmorin.

and smothers perhaps choicer and more rare kinds. In a large house a single large plant of in a prominent position has a noble appearance. As to compost, it is by no means fastidious, especially when it gets beyond the first stage. Light fibrous loam mixed with half its bulk of peat-mould and a plentiful addition of sharp river sand suits it admirably. It is safe in winter in a moist house kept at a minimum temperature of 40°. There is a crested form of *P. nemula* in cultivation which by some is thought to be an acquisition, but it is certainly less beautiful and not so easily grown as the type. This is

nate so quickly as many, and are liable to be smothered by *Pterises*, *Gymnogrammas*, and others, but this may be obviated to a great extent by isolating the plants from which spores are to be taken, and taking care that no other spores exist in the soil used for sowing on. In the case of *A. Nidus*, occasionally quite a good crop may be obtained, yet I have known many failures, especially when the spores have been taken from young plants. One great point of interest in raising seedlings is that some variety is sure to be found.

*A. Baptisti* and *A. Neo-Caledonic* belong to a very distinct group, and from seedlings of these

Those which offer most readily to the eyes of the tourist the finest trees set in the most picturesque surroundings are the forests of Valdomiello and Marmano. The vale of Asco is almost alone at the present day in being still able to show some ancient trees as yet untouched by the hand of the exploiter, but we were forced to abandon this part of our excursion, which, however, has a place in our plans for the future.

The finest specimens of *Pinus Laricio* we saw did not exceed 19 feet 6 inches in circumference. Trees of 14½ feet to 15½ feet in girth were frequent enough; some of these were more than 130 feet high, but the mean height of fine old trees is about 120 feet. In the forest of Marmano, near to the pass of Verde, the highest and also the best shaped trees were to be found, the dimensions of these being 11½ feet to 14½ feet round by 130 feet high. They grow in clumps by themselves or pretty thickly mixed with Beech and a few Firs. The *Laricio* in Corsica is found on the slopes of mountains with a marked preference for a northern exposure. Commencing at about 2950 feet, the limit of the Maritime Pine, it reaches an altitude of about 3400 feet. At this point it becomes rare, not because it does not thrive at such an altitude, since fine specimens are also to be found at the extreme limit of the forests, but because these highlands are pasturage in summer for flocks of sheep and goats. Outside this high zone replanting from seed is very easy; the great danger to the young forest arises from the risk of fire during the hot, dry summer months. In the older parts of the forest the risk of destruction by fire is less, the trunks of the trees being stripped of their lower branches and the underwood being generally choked off by Pine. The groups of trees are as close and as regular as in our continental forests of Picea and Silver Fir. This is especially so in certain parts of the Aitone forest, which is one of the most regular as regards growth. But the full picturesqueness of *P. Laricio* is best seen in the higher limits of the forests. Here the growth is sparser, because the conditions of existence are harder, but chiefly because the majority of the plants have been cut down by the sheep and goats. In its struggles with wind and snow the tree is not so high; the trunk thickens and throws out some powerful branches, the leader is destroyed, and the crest becomes flat and spreading. Looking at certain *Laricios* in the vicinity of the pass of Saint Pierre, between the limits of the Aitone and Valdomiello forests, it is difficult not to believe that they are Atlas Cedars, as these grow on the highest of the Algerian mountains. —MAURICE DE VILMOREN, in *Revue Horticole*.

**Caryopteris mastacanthus.**—The bright purplish blue blossoms of this Chinese shrub are quite unlike anything else in bloom at the present time, and being very showy withal, it is a plant well worth consideration where a suitable position can be found for it. This *Caryopteris* forms a bushy-growing plant that reaches a height of from 3 feet to 4 feet, and is clothed with deeply-toothed, oblong-shaped leaves, which are particularly hairy. The flowers, which are borne in axillary clusters on the upper part of the stem, are so numerous, that the greater portion of the plant is quite a mass of blue. It cannot be regarded as thoroughly hardy in this country, but is just one of those subjects well adapted for planting at the foot of a low wall along the front of a greenhouse, or even warmer structure, as in such a position the wood is thoroughly ripened, thus ensuring a good display of bloom. If cut back by the frost during the winter it quickly recovers, and flowers again the following autumn. In many places on the Continent it is more popular

than it is in this country. This *Caryopteris* was one of the great number of beautiful plants introduced by Robert Fortune, but it would appear to have soon been lost. For its re-introduction we are, I believe, indebted to Messrs. Veitch, through their collector, Mr. Maries, who visited China and Japan about the year 1880.—T.

**Desmodium penduliflorum.**—This is a very beautiful autumn-flowering plant usually classed with the shrubs, though at most it is only of a half-shrubby character, as after flowering it dies nearly to the ground, and pushes up the next season's shoots from a few large buds near the base of the plant. These shoots are long and wand-like, the most vigorous reaching a height of 6 feet or more. They are rather thinly clothed, especially towards the base, with trifoliate leaves, while the upper part is occupied by crowded racemes of bright rosy purple, Pea-shaped blossoms. These flowers are borne in such profusion as to quite weigh down the shoots unless some support is given. All stiffness and formality in this respect are avoided if two or three of the principal shoots are tied to sticks and a few of the others looped thereto some little time before the flowers expand, as by then the shoots will dispose themselves in a very graceful manner, and display the wealth of flowers to the best advantage. This *Desmodium* usually commences to bloom about the middle of September, and continues for some time. Early autumn frosts, however, occasionally injure the blossoms. The plant itself is perfectly hardy. This *Desmodium* used to be frequently met with as *Lepedeza bicolor*, a totally different plant, and it is now at Kew known as *Lepedeza Sieboldi*.—T.

## DESTROYERS.

### A LILY BULB DISEASE.

DURING the past year a destructive wave of fungoid disease almost completely ruined the crop of Lily bulbs raised in Japan for exportation to Europe. The first indication of this disease received at Kew was through Messrs. Tozer Bros. and Co., of Gracechurch Street, who sent a large number of diseased bulbs for examination. These bulbs formed part of a consignment received from Japan in November last, consisting of 848 cases, containing 73,050 bulbs of *Lilium speciosum* (Thun.), album, and rubrum. Out of this number only 250 bulbs arrived in a saleable condition, the whole of the remainder being more or less rotten and worthless. At a later date the same firm received a second consignment of 37,590 very large bulbs of *Lilium auratum*, and out of this quantity only 4000 were saleable. Similarly diseased bulbs received from Japan were afterwards sent to Kew for examination from other sources. Finally, a quantity of bulbs obtained through an agent from Japan, for planting at Kew, contained a large percentage suffering from the same type of disease. The bulbs received for investigation showed every stage of disease; in the earliest condition, the base of the bulb is alone discoloured and somewhat soft; this discoloration and softening of the tissues gradually spread from the base, until finally, in the most advanced stage, every part of the bulb is of a brownish colour, and sufficiently soft to admit of being readily crushed into a pulpy mass between the fingers. Microscopic examination revealed the presence of slender, continuous, hyaline, branched hyphae traversing the tissues in every direction; the cell-walls are never pierced, but gradually dissolved, and it is only at the last stage of the disease that the starch grains become irregularly corroded and gradually dissolved. So long as the epidermis of the bulb-scales remains intact there is no trace of mycelium or fructification on the surface, but when the tissue is reduced to a soft pulp, or when a diseased bulb is cut open, the broken surface is within twenty-four hours covered with a dense snow-white mycelium,

which within three days becomes studded with numerous clusters of fruit, resembling to the naked eye miniature pins with round black heads. The occurrence of this particular form of fungus on every bulb examined suggested that it might possibly be in some way associated with the disease, and subsequent cultures and inoculation proved this surmise to be correct. The fungus grows readily as a saprophyte, the spores germinating and forming the characteristic superficial white floccose mycelium, which within a week bears an abundance of fruit, on such variegated culture media as prune juice, sterilised potato decoction of bulb scales, &c. In one experiment four spores were sown in a 5 per cent. solution of cane-sugar in water in a Petri dish, and at the end of six days the entire surface of the liquid was covered with the fungus in a fruiting condition. When spores were sown in a hanging-drop along with a very thin section of Lily bulb-scale, it was observed that the germ-tubes could not enter the tissue through the epidermis, but that they entered readily at those points where the cells were not protected by the epidermis.

A set of experiments was also carried out using healthy Lily bulbs, some of which were furnished by Messrs. Tozer, for inoculation. For the purpose of destroying stray fungus spores the bulbs were immersed for a quarter of an hour in a 1 per cent. solution of corrosive sublimate. The bulbs were afterwards placed in wide-mouthed flasks filled with sterilised tap-water containing 5 per cent. solution of cane-sugar, the base of the bulb being immersed in the liquid; finally, the entire bulb was covered with a sheet of cotton wool soaked in a 1 per cent. solution of corrosive sublimate, the cotton wool being tied round the neck of the flask. When the roots were about an inch long an attempt at inoculation was made as follows: The numerous cultures of the fungus furnished a large supply of spores, which were tested and found to germinate readily. These spores were collected with a wet camel's-hair brush and washed off into a small amount of sterilised water in a flask until it became discoloured by the quantity of spores present; this was the inoculating material. A quantity of this spore-carrying water was added to the water in which two of the bulbs were growing, care being taken not to injure the roots; the inoculating liquid was also deposited freely between the scales of the two bulbs, which were then covered with sterilised cotton wool as before. The water in which two other bulbs were growing was inoculated as above, but the roots of the bulbs were broken off. Finally, 1 per cent. of salicylic acid was added to the water in which two more bulbs were growing a copious supply of the inoculating water added to the roots of the bulbs broken off, the bulbs replaced, and, as in the other instances, protected with cotton wool. At the end of six weeks the two bulbs whose roots were not destroyed appeared to be quite healthy; they were the plants in soil, and are still growing and show no indication of disease. The two bulbs with broken roots showed signs of disease at the end of three weeks after inoculation, and at the six week period the disease had extended nearly half way up the bulb from the base. After being cut open the same kind of fungus showed itself on the surface that has been described as occurring on the bulbs received from Japan. The companion bulb was also diseased, and in about three months was soft and rotten, and covered with the fungus in a fruiting condition. The two bulbs with broken roots that were growing in water containing 1 per cent. of salicylic acid remained quite healthy, made fresh roots, and are still living.

Numerous experiments were made with other kinds of bulbs, and it was found that the fungus refused to grow on Onions, however much mutilated. On the other hand, Daffodil bulbs are very susceptible to the disease; if the roots are broken, or a wound made in the bulb and afterwards powdered with the spores, the disease showed itself within a few days, and was in due course followed by the characteristic fruit of the

fungus. It was invariably found that, however much bulbs were mutilated and then inoculated with fungus spores, submergence for a few minutes in a 1 per cent. solution of salicylic acid or corrosive sublimate prevented the disease; in other words, all fungus spores coming into contact with the above-named solutions are destroyed, whereas the vitality of the bulbs thus treated is not at all affected. Dr. Halstead has described\* a somewhat similar disease, called "soft rot," attacking the sweet Potato in the United States. The fungus causing this disease (*Rhizopus nigricans*, Ehrh.) is closely allied to the species under notice causing the Lily bulb disease. In addition to the kind of fungus fruit already described, a second form, of sexual origin, called zygospore, is present in the genus *Rhizopus*; several large, spiny zygospores were found in the matted mycelium present on bulbs in the last stage of decay, and presumably belong to our fungus. Zygospores differ from the minute spores already described in requiring a somewhat lengthened period of rest before they germinate, and this means tiding the fungus over that period of the year not suitable for its growth, and germinating when favourable conditions, climatic and otherwise, return. During this period of rest the zygospores remain in the soil, or attached to the substance on which they were produced. The minute spores previously described possess the capacity of germination the moment they are mature, and enable the plant to extend its area of distribution; and these spores are produced very quickly and in immense numbers, it can readily be understood how rapidly the disease spreads when once introduced into a given locality. The fungus causing the Lily bulb disease, although allied to *Rhizopus nigricans*, is quite distinct from this and every other known species.

SUMMARY.

The Lily bulb disease is caused by a parasitic fungus called *Rhizopus necans*. The fungus cannot penetrate the unbroken tissues of the bulb, but gains an entrance through wounds, more especially rotten roots. The amount of evidence forthcoming indicates that the bulbs are not diseased until after they are removed from the ground. The pores of *Rhizopus necans* are killed by a short immersion in a 1 per cent. solution of corrosive sublimate or of salicylic acid. Neither of these substances has any injurious effect on living bulbs, provided they do not remain in the liquid for more than fifteen minutes.

PREVENTIVE MEASURES.

The fungus is by no means confined to Lily bulbs for its food, but, as experiments have proved, can live on a great variety of dead or decomposed substances; it may also occur as a parasite on other plants than Lilies in Japan, as it readily attacks and destroys Daffodil bulbs. Judging from the enormous amount of injury caused, it would appear that the fields where the Lilies are grown must be saturated with the fungus, growing indiscriminately on various substances, and attacking the Lily bulbs, along with other things, as a matter of course. If practicable, entirely new localities should be selected for the work. Even if this were done, great care would have to be exercised, so as not to introduce the fungus. The spores are readily conveyed from one locality to another in the soil, in tools, cart wheels, shoes, clothing, &c., in addition to being carried by wind or animals. An important point to remember is not to allow vegetable rubbish of any kind to accumulate, and all diseased bulbs should be burned and not allowed to remain on the ground, otherwise the zygospores that form on such old decaying bulbs would start the disease the following season. As little injury as possible should be done to the roots of the bulbs when they are removed from the ground, and the bulbs should be allowed to sweat\* before they are packed for exportation.

\* New Jersey Agricultural College Experimental Station, Bulletin No. 76.

If the fungus is known to be present when the bulbs are being prepared for packing, they might be placed in a solution of salicylic acid as advised. The sterilised earth in which the bulbs are packed appears very suitable for the work, and cannot be in any way considered as a cause of the disease.—G. MASSEE, in *New Bulletin*.

KITCHEN GARDEN.

POTATOES.

On the whole this cannot be considered one of the most favourable seasons for this crop, for those who planted early had them cut down by the late spring frosts, while those who deferred planting till later in the season had to contend with the dry weather which visited us in July before the tubers had made their full growth, this causing a serious check. In this district the soil is very heavy; therefore, not suitable to the growth of fine tubers. Still, where the ground is properly tilled some very good crops and fine roots are obtained, and even this season there is little to complain of. The early kinds were quite up to the average, while those which are considered midseason varied very much, some being a full crop and others not so good. There is, however, one great advantage, as no disease has presented itself. Amongst the new varieties grown the palm must certainly be given to Carter's Snowball. The tubers in appearance much resemble those of Satisfaction, but they are much rounder than in that variety, have a rough skin and shallow eyes. This is a white Potato of great promise, being a good cropper and free from disease. The haulm is, however, too strong for small gardens, for with me it grew about 4 feet in height. Veitch's Main-crop is a nice variety, having even tubers of medium size; with me there was no disease. English Wonder was fair, but not so good as either of the previous named. Reliance was very fine indeed, the tubers being of fair size and even in shape; this promises to become a favourite. The finest crop of any was produced from tubers sent from New Zealand. These were dug up in February in the antipodes and sent by post. It was early in May when they reached me, and after being exposed for a short time were planted, the yield from one pound being sixty-three. The tubers are even in shape, of fair size, with shallow eyes. The account I had with them was they were the best in the colony. Of the older kinds, Syon House Prolific was very good, so were Supreme, Triumph, Windsor Castle and Flourball. The dry weather in July caused a serious check to the last variety, many of which, having set the skins prematurely, super-tuberated owing to so much wet during the latter part of August. Over 3½ inches of rain fell here during that month, which saturated our heavy land to its fullest extent, particularly in low-lying places. To grow fine tubers on such ground is no easy task. Disease, however, seldom follows rain, unless there is a close, hot atmosphere, and as August, on the whole, cannot by any means be said to be close and hot, there is every hope of the disease passing by. Crops, as a rule, will not be so heavy this season as they are sometimes, unless in districts that were more favoured with showers than this, and where the soil is in a better state of cultivation. I never use any fresh manure for Potatoes, and this I have no doubt is the reason there is so little disease, superphosphate of lime being the only artificial dressing the ground has, and this is given at the time of planting.

H. C. P.

Busted Park, Uckfield.

CABBAGE SPROUTS.

I do not agree with the views expressed by "S. M." (p. 155) as to the superiority of young first crop Cabbages during autumn over the sprouts or second crop of hearts made by the main spring crop. On the contrary, given good treatment I fail to see any falling off in the quality of the latter, for autumn rains and cooler nights tend to produce hearts which may be somewhat smaller than those of the first cutting, but which are quite tender and good eating. I consider that a Cabbage bed once cut over has not done half its work, and that the rooting up of the stumps at that period is altogether wasteful, as there are but few things, with the exception of Celery, for which the ground thus cleared is suitable, as one would not expect good results from an immediate re-cropping with any of the Brassicas. As regards the plea of exhaustion of the soil, nearly all the Brassicas do this more or less, but Cabbages at least will come off in good time to allow of manuring and digging taking place during winter, when the ground may be put in good heart for almost any of next year's crops. We do not destroy our Brussels Sprouts and the like until they have finished up the whole of their sprouts, although allowing them to do this drives digging operations well into the spring months, and I fail to see why we should not get full value out of our Cabbage beds in the same way. I grant that a young Cabbage bed looks better than a sprouting old one, but this appears to be the only advantage, and, on the other hand, economic reasons for leaving the latter might be given in plenty. First we have the question of labour; the old bed gives two crops as a result of one preparation; again, there is no hesitation in commencing to cut in spring as soon as hearts are at all fit, for there is the knowledge that a second crop will come as the result of this cutting. Then, too, in a closely-cropped garden it is sometimes a little difficult to find room for all the green stuff that it is necessary to plant during summer, and having to plant, perhaps, a large plot of Cabbages especially for autumn use would only add to this difficulty and leave less room for the hardier Coleworts, Savoys, and Kales that do duty in winter and spring. Given the right varieties, for all Cabbages do not form good-hearted sprouts, I think that old Cabbage beds justify their existence until winter frosts put an end to them.

J. C. T.

**Beets.**—In a garden where there were growing very fine rows of Beets, Dell's Crimson and Nutting's Dwarf Red being singularly good and true, even to colour and texture of roots, which I tested, a stock that is termed selected was sadly marred by having prominent in it numerous coarse red Mangold Wurtzels. This mixture could not have been due to bad selecting, as such things would never have been found in any good Beet stock, and the inference is that some Mangold Wurtzel seed was either negligently mixed with the Beet seed, or else some was left in the cleaning machine. The fact serves to show how very careful seed growers and seedsmen should be, as a little lack of care may thus be productive of grave trouble to the gardener, who, as a rule, has enough burdens to bear that may seem to be unavoidable.—A. D.

**Potato Syon House Prolific.**—Having just finished lifting late Potatoes, I am much struck with the heavy crop of handsome tubers produced by the above new variety, and if the quality, which I have not yet tested, is right, there is no doubt it is the finest introduction of late years. From twenty-four cut sets planted with no extra advantage of room or manure over the other main crop varieties, there were lifted two bushels of magnificent tubers, this being far and away the best crop in the garden, and especially good for such a dry season. I am pleased to note, too, that it sustains its character as a disease resister, for the haulm remained green and growing later than did that of those old and tried varieties Magnum Bonum, The Bruce, and The Gentleman. The tubers are above medium size, pebble-shaped,

rough in the skin, characteristics that all tend towards popularity. I should imagine that Syon House Prolific will make a first-class main crop field Potato, as the haulm is robust enough to withstand ordinary field culture, and the tubers will bear some toning down in size.—J. C. TALLACK.

**Potato Ashleaf Kidney.**—How wonderfully well this fine old Potato, literally the oldest in commerce, holds its own against all comers. I have in the past used pollen from it to intercross with Puritan, Beauty of Hebron and others to endeavour to obtain the fine Ashleaf earliness and flavour with the American crop, but I never have quite succeeded: neither, so far as I know, has anyone else. The Ashleaf has in tuber form, in colour of flesh, and in undoubted flavour, as well as earliness, characters all its own. It serves to show amongst Potatoes how closely yellowness in flesh is identified with flavour. Mr. Crook has a beautiful stock of the old Ashleaf at Forde Abbey. He obtained it originally from Norfolk, where it has been grown for many years. The Chard soil seems to suit it admirably. I could not sympathise with a gardener in a large place who the other day showed me a long border of Magnum Bonum which he had purchased and planted last spring as Ashleaf Kidney.—A. D.

**Large Peas.**—At page 155 "S. M." refers to a note of mine on large Peas, and sees no reason to find fault with them. I myself did not condemn them, but my employer did, and I have known several instances in which employers have done the same thing, apparently considering very large Peas vulgar in the same way that they would a large head of Cauliflower, large Broad Beans and the like. For my own part, a Pea cannot be too large, provided it is tender and of good flavour and colour, but gardeners have to study the fancies of their employers, and I have more than once read and heard of the latter objecting to the very large types of Marrows. Where this is the case the medium varieties named in my notes will be found to give general satisfaction, a thing all second-sized sorts will not do in hot, dry summer weather, as the haulm is generally less vigorous than that of larger podded sorts.—J. C.

**Cauliflower Eclipse.**—I was pleased to read Mr. Tallack's note (page 115) on this Cauliflower. I will remember it first being distributed by a Manchester firm, and it being found, as Mr. Tallack says, most useful for affording a supply in late summer, or to fill the gap between secondary batches of Walcheren and the earliest lots of Autumn Giant, a most trying season for Cauliflowers. I was employed in a garden where some seed of Eclipse was sent for trial previous to its being sold to the public, and the vigorous habit of the plant in a dry season, and the compactness and whiteness of the heads were noteworthy. It was much grown in Essex, being sown in the open in March and April in preference to Walcheren. Good as the latter variety is in fairly moist seasons and on good deep soil, it soon suffers in time of drought on poorer soils, much sooner in fact than Eclipse.—C. C. H.

**Parsley for winter.**—A common reason of gardeners having an insufficiency of good Parsley for use in winter is either depending on spring sowings to carry them through the summer and to afford fronds for the winter months as well, or sowing too late in summer for the winter supply, matters in the latter case being sometimes made worse by hot, parching weather. In cool, deep soils the difficulty is not so great. A friend of mine who needs a good supply of Parsley all through the winter recently informed me that he makes but one sowing, say in April, and afterwards transplants, say, in June, when the young plants are large enough for moving. The undisturbed portion of the seed-bed affords gatherings through the ordinary summer months, while that transplanted is in good trim by August, and remains vigorous and profitable right on to sowing time in April again. It is transplanted into beds to suit frames, which are

placed over it when frost arrives. I saw the beds in September and nothing could be more satisfactory. My friend assured me the system never failed him.—GROWER.

**Soil for Onions.**—It is surprising what fine Onions are sometimes grown in gardens where the soil is sandy and not what is considered a good Onion soil, this being done by altering its character by the addition of various ingredients. Some of the very finest specimens of Ailsa Craig, The Wroxton, and other exhibition varieties I have seen have been produced by Mr. Atkinson in the gardens at Wroxham Hall, Norwich. The soil naturally is sandy and somewhat shallow, and in dry summers soon loses the moisture necessary to support the thirsty roots of Onions. In Norfolk is found a white marl which is much used in road-making. This, with a liberal supply of well decomposed farmyard manure, Mr. Atkinson had wheeled on to a couple of plots and well worked in with the staple. Since then he has had no difficulty in growing fine bulbs and plenty of them. Two plots so treated allow of one being cropped with Onions every alternate year.—J. C.

**Onion Allan's Reliance.**—This is a wonderfully fine type of white Spanish Onion, having been selected and saved for many years by Mr. Allan, of Gunton. I have been a grower and exhibitor of Onions for many years, and am acquainted with most of the best strains in cultivation. Allan's Reliance surpasses them all for shape, colour, and mildness of flavour. Under good cultivation it can be grown as large as any variety. It has an exceptionally thin neck, much resembling Nuneham Park in this respect. Reliance was selected for twenty-six years by Mr. Allan before being sent out, and in looking through a large quarter of bulbs recently I could not detect the least difference between any of them, so true were they. When better known it will be universally grown. It will keep as long and as well as James' Keeping.—J. C.

#### POTATO NOTES.

THE remarks on page 156 in connection with Spinach are applicable to nearly all vegetables. Varieties, or rather names, are multiplied by a constant and endless regularity, and "so-called" new things are purchased at an increased rate, to prove on trial often only old friends under a new name. This is certainly true of Potatoes, a vegetable above all others, when a large supply is expected, of which one likes to have the very best varieties to suit different conditions of soil, and of which it may be said that when once well suited one should be very chary shelving for other names. One of the best finds of late years for first early work has been Star of Reading, decidedly the heaviest cropper with me of the first earlies, and doing its work as quickly as any. This was the name received with it, but I have met with precisely the same Potato at three shows under as many different names. Well grown it is a flat kidney, very even, and considerably larger than the average first early. Given carefully selected seed and the same conditions of soil and general treatment, there is hardly a bit of difference between Duke of Albany, White Beauty and Early Puritan, and mixed up together, it would be difficult to separate them. Of the last-named, a friend who grows it on a rather heavy soil tells me it is apt to run coarse and watery, but this would probably apply to all three; at least, I remember that Duke of Albany, on which I have relied for many years as the main first early, was not so satisfactory from a piece of ground that was somewhat stiff, but was all right the next year after working in a heavy surface dressing, some 4 inches in thickness, of half-decayed leaves. I do not want a better Potato to follow the Duke than Windsor Castle. It is of excellent quality, and invariably yields a heavy crop of even-sized, shapely tubers. King of Russets is a great favourite, especially for baking or to be served when boiled in the skin;

it is a great cropper, with a very small percentage of seed size. A portion of the crop just lifted has given me 32 bushels from 10 rods of ground. The Bruce is the only Potato I grow that degenerates from successive home-saved seed. Others have been continually in stock for years, and the produce is just as good as when first acquired: but after some three or four years' saving The Bruce turns out like a rough Magnum, the yield quite as bad as that of the last-named from heavy soil. Writing above of synonyms reminds me of a question. Suppose good seed respectively of Magnum and Bruce purchased from a first-class firm and planted in thoroughly good Potato soil, would any ordinary grower guarantee to separate the two if they were mixed after lifting? I think very highly of The Saxon as a late variety; it is practically a disease-resister, a very heavy cropper, and of good quality. E. BURRELL.

**Onion Golden Rocca.**—This Onion is much grown in the eastern counties and is frequently exhibited in grand form, sometimes reaching two pounds in weight. It is of specially fine globular form, the skin a beautiful golden colour, which adds to its value as an exhibition Onion. It has a particularly mild flavour and keeps well. It does better when sown in the spring than most of the Rocca class. Those who grow this class of Onion for exhibition should give Golden Rocca a trial. They will, I am sure, be pleased with it.—GROWER.

**The Carter Spinach.**—At page 156 "A. D." asks in what way the Carter Spinach differs from the Flanders, large-leaved Virolay or Victoria, and Longstander. My reply is, in its having much larger and more succulent leaves, borne on long foot-stalks. There is no variety that can touch it in vigour of growth and general excellence. A gardener of my acquaintance, who is expected to supply plenty of Spinach all the year round, has now given up all other summer sorts growing only The Carter. It requires to be freely thinned out, and when grown on fairly good ground it is surprising how it will stand a hot dry time.—MIDLAND GROWER.

— For the information of "A. D.," on p. 156 this fine Spinach was sent for trial to the gardens of the Royal Horticultural Society, and granted an award of merit at the committee meeting of June 11, 1895.—JAMES CARTER & Co.

## GARDEN FLORA.

### PLATE 1136.

#### IRIS LEICHTLINI.

(WITH A COLOURED PLATE.\*)

AMONG the many lovely and beautiful Irises from the Holy Land, Turkestan, &c., the remarkable species appearing in the coloured plate to-day must ever occupy a conspicuous place by reason of the rare beauty of its flowers. This is not so much due to the size of the blooms individually as to the colour, or rather the combination of beautiful colours, so well depicted in the accompanying plate. Visitors to the Temple show in May last will doubtless call to mind the many lovely and rare species that were exhibited, notably by Messrs. Barr and Sons, and likewise by Messrs. Wallace, of Colchester. The former, in addition to the beautiful species in the plate, had cut flowers of such striking forms as *I. violacea*, *I. Korolkowi*, *I. vaga*, *I. lupina*, &c., that made quite a unique little group of these inimitable species. In the Messrs. Wallace's lot were some equally choice gems of this race, *I. iberica*, *I. Hartwegi*, *I. lupina* and *I. Gatesi* being especially note-

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.



IRIS PELOPONNESICA



THE WEEK'S WORK.

KITCHEN GARDEN.

thy. It is noteworthy in a double sense, because showing that these usually difficult and sometimes unmanageable species are now far better understood than was formerly the case. The Chester exhibit, because grown in pots, went a little further, and showed that those who can for many and various reasons cultivate these things in the open ground may even yet attempt their culture in pots, for at least by the proper means extremes of cultural details—e.g., moisture at one time and great heat and drought at another—may be indulged in at will. This latter may be done by removing the pots bodily to a dry, airy shelf in the greenhouse, without the necessity of unnaturally exposing the naked rhizome to external influences consequent upon a fog. On such a shelf the drying and the cooling would be absolute, and with the return of autumn the pots may be put out of doors again. It is quite possible, too, that some varieties may submit to potting and flower all the year, provided the plants are rammed in close, firmly and the pots plunged to the rim on a very sunny border. The amount of soil required by these plants is so very small, that three pots may be well planted in an 8-inch pot, making the soil as hard as possible about them.

The whole group of Cushion Irises, with its near allies, is so greatly varied and remarkable in respect, and so unlike any other plant flowering in the garden, that they are worth any trouble to bloom them, and if this can be accomplished more generally by some such simple method as here described, a much larger number will be capable of enjoying to the full these wondrously beautiful flowers. Some of the chief points in the culture of these Irises are a dry and warm border, a good loamy soil, which is not deep or over-rich, and very firm setting; indeed this latter is most important, and with the pot system suggested above can be indulged in to any extent. The best season for planting is early in September, at which time the good roots start into growth readily and require root moisture in plenty. The majority of the kinds, though quite hardy, are best for some light protection in very severe weather, straw or bracken being one of the best things for the purpose. Things to avoid when giving winter protection to such things are such as straw, hay, straw, or even bracken, all of which once drenched with wet remain so, and, decaying about the plants to be protected, do harm rather than the good that was intended. The example from which the drawing was made appeared in the hardy plant department at Kew this year. The flowering specimen was about 15 inches high, and, so far, is regarded as a more vigorous kind than some of its near allies. The lovely Iris is scarcely a novelty, as it was first flowered by Dr. Foster in the spring of 1881. Notwithstanding, it is still among the most of this beautiful race of hardy plants.—E.

With reference to this Iris the following notes regarding it have been kindly sent us by Herr Dr. Leichtlin, Baden-Baden:—

Dr. Leichtlin was discovered by Albert von Pell in the mountainous districts of Turkestan, where it is found in company with *I. Korolkowi*, *I. v. I. stolonifera*, &c., and is described in *Act Hort. Petrop.*, 1884. It was introduced to cultivation in 1879 from a collection of unknown Irises sent to Baden-Baden by His Excellency Lieutenant-General N. de Korolkow. It is a striking plant by the rainbow-like unusual coloration of its flowers, showing blue, white, rose, and a peculiar brown. It is perfectly hardy, wants a loamy soil and a dry situation, and is best left alone for several years.

HEAVY rains and rough winds, together with a low night temperature, which have been prevalent during the past fortnight, have been unfavourable to most crops, and the wet state of the ground at the present time will for the time being prevent such work as moulding up Celery, harvesting spring-sown Onions, and the clearance of exhausted crops. In some soils wireworms, grubs, and even the common worm prove destructive to the Celery crop, as they not only destroy the outer leaves, but also eat into the centre of the plants, causing them to become quite unfit for table use. The present wet weather is also favourable to the small black slugs so common in some gardens, and which do so much damage to this and other crops. A good dusting of lime about the plants just previous to moulding them up will greatly assist in preserving them from these pests. The lime should be in a powdered state, so that it can be worked well round each plant after the outer foliage has been drawn together and tied loosely with a piece of matting. The ridges of soil, too, which will be used for moulding up the crop, should also have a dressing so as to make it repulsive to the vermin. Some go to the trouble of placing strips of brown paper round each plant to prevent the soil touching the outer leaves. This greatly assists in the work of blanching, and when ready for use each stick is beautifully clean, and there is much less work in preparing it for use. There are properly prepared collars, which may be obtained from all seedsmen for this purpose, but strong paper may be used and kept in position with a strip of matting tied loosely round the top. The crop so far is, fortunately, free from disease, but a close watch should be kept and hand-picking resorted to immediately any of the leaves appear to be affected.

ONIONS.—Spring-sown crops have mostly been harvested in the south, but in cooler districts the tops are still green, and unless we have a few weeks of dry weather, some difficulty will be experienced in ripening them properly, without which they will not keep in good condition for any length of time. Advantage should be taken of the first fine day to get them off the ground when the tops show signs of ripening, and it would be better to remove them at once to a light, dry place under cover to assist in maturing the bulbs, than allow them to remain on the wet soil, as though there may be no rain for a few days after they are pulled up, the heavy dews will prevent the tops drying up as quickly as would be desired. It is not always convenient to spread them out on the stage in a vinery from which the crop has been cleared, but this is one of the best positions to finish them off properly. Failing this, they may be placed thinly in a dry frame or pit, covering them with the lights when rain is expected.

JERUSALEM ARTICHOKE.—These will have reached a great height by now, and it will be necessary to give them some protection against wind, or they will probably get blown over and many of the tubers will be turned out of the soil. In this garden the tops are quite 8 feet in height, and being planted 1 yard apart, they have branched out freely. A few stout stakes have been driven into the soil round the plantation and close to the outer rows, and from these strong cord is fixed to prevent the plants swaying over. Seeing that growth is about terminated now, the central shoot will be shortened back to about half its length, and by retaining the lower side shoots there is less risk of any damage being done by gales and heavy rains, and the size and quality of the tubers will in no way be impaired.

ASPARAGUS.—This is likely to suffer just now from the same cause, and though the season is rapidly approaching when the tops will be sufficiently ripened to be cut down, they should be prevented from being twisted about, or the buds at the base will be damaged, and next season's produce

will suffer in consequence. A few of the most forward seed-bearing shoots will have turned yellow, and these should be carefully removed before the berries fall to the ground, otherwise a number of seedlings will spring up next spring, which if not pulled up at once will become established in the bed, and tend to rob the permanent roots of moisture and nourishment. It is not too late to sprinkle the beds with salt where the soil is light and poor, as the roots are practically active until the ground becomes frost-bound, and feeding in the autumn assists to plump up the buds or crowns which are to furnish next season's supply. Now that the ground is full of moisture, farmyard liquid may also be applied freely. This will enrich the soil to a good depth and benefit the growth next summer.

SEAKALE.—The time will soon arrive when it will be necessary to resort to forcing this useful winter vegetable, but the crowns must have become thoroughly matured and all the foliage ripened naturally before any attempt is made to lift the roots or they will not prove satisfactory when placed in heat towards the end of October. In the meantime the ground between the plants should be kept free of weeds and rubbish, and all decayed foliage removed, so that what sun we may have will reach the centre of the plants and promote early ripening.

FRENCH BEANS.—In the forcing department, French Beans and Cucumbers will require careful treatment, so that growth will be clean and strong. A high temperature by artificial means will prove harmful to French Beans, but closing the house or pit early in the afternoon, so as to run up the temperature by sun-heat, will both strengthen the plants and encourage growth. A successional batch should be sown as soon as the last lot has formed the first few rough leaves, as it is not to be expected that they will continue to bear for any length of time during the short and foggy days of autumn. It is only by making frequent sowings and giving plenty of house room that anything like a regular supply can be kept up after this. RICHARD PARKER.

FRUIT HOUSES.

LATE GRAPES.—Lady Downe's and other late varieties, if well coloured, may be freely ventilated during the day when the weather is fine and bright. With these late Grapes colour is no indication of maturity, and it is not safe to assume that the berries are filled with sufficient saccharine matter to ensure their keeping well into the spring, until the foliage itself begins to give signs of ripening. Therefore, although the colour may be perfect, it is just as well to continue subjecting them to a little mild fire-heat some short time longer, combined with ample ventilation, until the leaves assume their autumnal tints, when it may be dispensed with. After this it will only be occasionally required to keep the house dry during foggy and wet weather, or to prevent the temperature falling too low when frosty. As Alwick Seedling is rather impatient of too much fire-heat after finishing as far as colour is concerned, the pipes in the immediate neighbourhood of the Vine should be covered with boards or mats, and if possible a little more air may be admitted just at that portion of the house. This variety should always be planted at the coolest end of the house, and as it is a Grape that colours grandly and without special treatment, the further it is kept away from the hot-water pipes the better. The new white Grape Lady Hutt has done well this season, and it succeeds in the same house with Lady Downe's, the temperature and treatment accorded the latter seeming to suit it admirably. As outside borders have had a thorough moistening, down to the drainage, they should now be covered with corrugated zinc sheets, old lights, or anything that will carry off water. In cases where the berries of these late Grapes are not properly coloured, regular fire-heat is absolutely necessary, especially if the weather should continue chilly and showery. The pipes should be kept sufficiently warm to allow of air

being admitted both at the front and apex of the house. The internal atmosphere must also be kept dry, and whatever watering is required should be done early in the morning and on bright days only. Again, in case the Grapes are in a very backward condition, no effort should be spared in forwarding them as much as possible by the application of plenty of fire-heat, also by making the utmost use of solar heat to raise the temperature up to 85° or thereabouts. On dull days make use of enough artificial warmth so that the mercury reaches to 75°, but 65° will be ample for the night, and continue this treatment until the berries are well coloured. Attend to the watering of inside borders, using stimulants until colouring becomes general; after this discontinue their use and give pure water only, keeping the surface well mulched, both to check loss by evaporation and to prevent frequent waterings. If the roots are in outside borders the Vines will yet continue to make growth; this must, however, be kept pinched, so that the trellis may not become crowded with foliage, as it is necessary at this late season that the Grapes experience a certain amount of sunlight as an aid towards attaining good colour.

**LATE MUSCATS.**—If these are well coloured and thoroughly ripe the temperature may gradually be lowered, but a dry atmosphere being indispensable for their good keeping, a little artificial warmth will be needed now and again to dry up any moisture that may arise in the house and to keep the air in circulation. The temperature should never be allowed to fall below 50° for Muscats when ripe. At this they will take no harm, but a lower temperature with attendant condensation of moisture will bring about spot on the berries more quickly than any other cause, and this soon leads to their speedy decay. If the foliage on the Vines is thin, it may be necessary to afford a slight shade for a few hours during the morning when the sun shines brightly, and advantage should be taken of such weather to thoroughly ventilate the house, which will be sufficient to dispel all damp arising from ordinary causes. In cases where the Grapes have not yet finished colouring the treatment recommended in a former calendar should be adhered to until the berries are perfectly finished both as regards colour and ripeness.

**LATE HAMBURGHIS.**—These having finished and being perfectly ripe, the house should be kept cool and dry, and to this end well ventilated whenever the state of the weather will allow. Close the ventilators on wet days, and if drip is troublesome through the roof being faulty, throw the ventilators wide open the first opportunity, turn on a little fire-heat, and get all dried up again as quickly as possible. The skins of the berries being very thin, they are very susceptible to injury from changes of temperature, and on no account should they be subjected to a less warmth than 45°. Look the bunches over at least once a week, and remove any berries found to be decaying. In some places spiders are apt to prove troublesome by taking up their abode in the centre of the bunches, not only of Hamburgs, but all other varieties, and they spin their webs around and amongst the berries and footstalks. When once they take possession it is a difficult matter to dislodge them, and the best means of keeping them under is to pass a hair broom into all corners and crevices in the house at least once a week, and if this is continued from the time colouring commences, when a drier state of things obtains, which is more congenial to their tastes, this will keep them under, they not liking the constant disturbance.

**OTHER VINERIES.**—As the Vines are cleared of fruit, partially prune back the laterals, and, if found necessary, take steps to cleanse the foliage if red spider and thrips have been rife. After this proceed to do any lifting that may be required, also make additions to borders, and top-dress if neither is necessary, and for the present leave the surface unprotected, that the Vines may receive the benefit of autumn rains. Advantage should be taken of the spell of rest the Vines will

enjoy to get all necessary repairs and painting done before the winter sets in. The hot-water apparatus should also be overhauled, defects made good, or, if alterations are contemplated, get them done before there is a possibility of the house being required for use.

**YOUNG VINES.**—Those planted last April or May should be encouraged with artificial warmth to ripen their wood at as early a date as possible, but this must not be carried to the extreme, or the object in view will be defeated. If the canes have turned brown, the laterals may be pruned away, and this will benefit the buds, particularly those on the lowermost portion of the canes, provided always that the premier leaves are intact. If any of these have been lost, the laterals emanating from those portions of the canes should be cut back to one leaf, so that the latter will continue to draw sap for the benefit of the main buds until they are thoroughly mature. A little fire-heat and ample ventilation will assist the ripening of the wood in cases where the Vines are in an immature condition. See that they get all the water they require at the roots, and keep the foliage clean and healthy until they have performed their proper functions.

**POT VINES.**—The canes should now be perfectly ripe, and those intended for early forcing will either have done so or will be shedding their leaves. If all lateral growths were pruned away when they were turned outdoors, nothing remains to be done now but to remove them under cover, as the continuous rains we are now experiencing will keep the roots on the move. If placed in a perfectly cool house or shed and water withheld until the soil becomes dry, the Vines will experience the needful season of rest they require before starting. The soil should not be kept dust-dry or too wet, a look round about once a week being sufficient, and the shortening back of the canes to the required length may be deferred until they are quite at rest.

A. W.

## FRUIT AND VEGETABLE CROPS.

### WESTERN.

**Hagley Hall, Stourbridge.**—Apples are a good crop, in some instances a heavy one. Pears, Jargonelle, Bergamote d'Espere, Uvedale's St. Germain, Doyenné du Comice and one or two others are a good crop. Early Prolific Plum is a good crop, most other kinds a failure. Apricots a very light crop. Damsons are a failure. Nuts are a very heavy crop.

Vegetables have been good and plentiful. Runner Beans did not set well until the rain came, but the dwarf Canadian Wonder kept us supplied until the others were ready. The later crop of Broad Beans did not set well owing to the black fly. Globe Artichokes have thrown up very freely; I find they do better if removed to fresh ground occasionally. Peas have done remarkably well this year about this neighbourhood.—D. R. DIXON.

**Badminton Gardens, Gloucester.**—The fruit crops in this garden and neighbourhood are, generally speaking, very much below the average. The Apple crop is partial, and early kinds of the Lord Suffield and Stirling Castle types are plentiful, but mid-season and late varieties are very scarce, except in a few sheltered and favoured spots. Pears are very thin, and Plums almost a total failure. The same may be said of Apricots. Peaches and Nectarines outside are fairly abundant and good, although somewhat late. Strawberries were extremely plentiful and very fine; I do not remember a better Strawberry season. Raspberries were not so prolific here as usual, owing, no doubt, to the poor canes grown during the summer of 1896. Currants of all kinds, also Gooseberries, were abundant and excellent. Nuts (excepting Walnuts) are very plentiful.

The vegetable crops are quite the reverse of the fruit, being extremely fine and good. Peas are suffering from mildew, I think more than

usual, and late kinds do not promise well; but early and mid-season varieties were very good. Beans of all kinds are most abundant. The Potato crop will not, I think, be above the average but if the disease does not set in too virulently fancy there will not be much to complain of, all kinds seem doing well and the haulm ripening gradually. All the Brassica tribe looks well. Brussels Sprouts particularly so.—WILLIAM NAYLOR.

**Cloverley and Shavington, Salop.**—Apples are very partial, especially the better dessert varieties, though others, chiefly cooking kinds, have a fair average crop. Pears on walls and espaliers are an average crop; fruit small, owing to drought, very scarce on pyramids. Plums on walls protected only with fish netting carry a crop of fine fruit; away from walls a failure. Damsons very scarce. Cherries are poor, especially Morello. Apricots are an average crop of good fruit. Currants, Raspberries and Gooseberries are an average crop. Nuts good. Strawberries an average crop.—T. G. CUCKNEY.

**Killerton, Exeter.**—Apples are below average. Among the best are Blenheim Orange, Hawthornden, Manks Codlin, Domino, Stirling Castle, King of the Pippins, Mère de Ménil, Schoolmaster and Tower of Glamis. Pears are under average; Beurré Clairgeau, Beurré Bosc, Comte de Lamy, Victoria, Pitmas, Duchess, Durondeau and Passe Colmar are good crops. Peaches and Nectarines are partial. Hants Early, Royal George, Dymond and Grosse Monne have good crops. Many of the trees were very much blistered in the spring, but have recovered. Apricots were very scarce throughout. Cherries have been a moderate crop. Morello are exceptionally fine; early sorts were below average. Plums are very scarce on the walls, the standard trees in the orchard have fair crops, the sorts being Green Gage, Victoria and Prolific Englebert. Figs are plentiful and fine, the best being Brunswick, White Marseilles and Black Turkey. Cobs and Filberts are fine crops.

Vegetables have been throughout the year good and abundant. Potatoes in the field are very promising; Beauty of Hebron is dying away and the haulm spotted with disease, while Schoolmaster, which I find the best for the general crop and late kinds are looking very promising. The grown many other sorts side by side in the same field for twenty years, but none equals Schoolmaster for cooking and keeping.—JOHN GARLAND.

**Stoke Edith Park, Hereford.**—The fruit crop in this neighbourhood as far as Apples, Plums and Damsons are concerned is a disappointing one notwithstanding the fact that the trees in three instances were covered with blossoms. The cause of this almost total failure in the case of standard Plums and Damsons, both in orchards and gardens, may be traced to bitter cold easterly winds which blew with great persistency near the whole of the time the trees were in bloom. This, as might be expected, had a disastrous effect on the flowers, so that the delicate organs of fructification became seared and shrivelled, and they eventually dropped off the trees. In the walled-in garden the trees fared better, and a good crop set on bushes and pyramids, only, however, to be badly hit by frost later on, when they all dropped. On the walls many of the trees are carrying fairly good crops, these escaped owing to the protection afforded by the broad, over-hanging copings. Among Plums Victoria stands out conspicuously as being the heaviest cropper not only here, but in many other places in the district, while Herefordshire Prolific is the best cropped variety of Damson here. It is satisfactory to note that the trees generally are clean and have made good growth, a good augur for another year. Turning to Apples, the reason for the partial failure in this case is distinctly traceable to two causes, the first of which was the caterpillar and weevil maggot deprivations, and the second the disastrous effects of the morning frosts on May 9, 11, and 12, which alone did great damage. The majority of the trees in the orchard hereabout blossomed well, although traces of last year's insect attack were plainly visible by the

debilitated appearance of the trees in many instances. Unfortunately, through neglecting to take preventive measures, the trees were again fully attacked by insect pests this spring, and this alone would account for the loss of quite half the crop on every tree. Then occurred the frosts mentioned above, and these destroyed numbers of the blooms which had escaped the insect foes, with the result that the aggregate crop for the district can hardly be termed one-half of what it should be. In these gardens, where washing of the trees both in the winter and spring receives the greatest attention, insects put in an appearance, but not in sufficient numbers to do any great amount of harm, and they were quickly subdued by spraying. We can never hope to entirely get rid of these pests so long as matters are allowed to take their course in surrounding orchards, and shall always have to combat them in greater or lesser degree every spring. Our best trees suffered from frost, but in spite of this we have many trees heavily laden with fruit, foremost amongst which are Lord Grosvenor at Lord Suffield, Cellini, Worcester Pearmain, Boston, King of Pippins, The Queen, Ecklinville, Stirling Castle, Cox's Pomona, Annie Elizabeth, Rich, Lord Derby, Beauty of Kent, Kentish Filibasket, Stirling Castle, Tyler's Kernel, Warner's King, Washington, and Pott's Seedling. It is satisfactory to see that many of the late-flowering large Apples are well cropped, and their immunity from frost and caterpillar attacks lies in the fact of their being so late before starting into growth. Pears, through their having flowered in advance of Apples, were set and out of harm's way when the frosts previously noted occurred, and thus both in orchards and gardens are bearing good crops, cordon trees especially. A few sorts calling for special mention are Hacon's Incomparable, Marie Louise, Marie Louise d'Uccle, Birkhouse's Beurré, Chaumontel, Gratioli of Jersey, Beurré Hardy, Glou Moreau, Bergamote d'Espere, Prince Consort, Beurré d'Arenberg at Althorpe Crassane. Dessert Cherries on bushes and wall trees has been abundant and good, while Morellos have been and still are plentiful and the trees in all cases have kept much better than usual. The fine old standard Cherries, of which many are to be seen in the vicinity of cottage gardens in the adjoining parish, have borne so well as usual, they having doubtless suffered from the effects of frost, as the fruit, though apparently well set, dropped in shoals. Taking Apricots next, it is pleasant to be able to relate that, although the trees are not so heavily laden as last year, they have carried excellent crops of fine fruit, which ripened to perfection. The trees have the protection of coping boards and frigid domes, and this seems to be the surest method of ensuring a crop of this delicious fruit each year. In consequence of the hot, dry weather watering has been rather a heavy item, but the rains secured more than compensate for all the labour and trouble involved. The trees are clean and have made good growth, the wood being of a fruitful character. Peaches and Nectarines taken collectively are a good crop, the exceptions being a few trees which made rather strong growth last year, and these will be lifted this autumn. Filbert, which seems to have been prevalent in some parts of the country, has been absent, and this has given but little trouble. Red spider put its appearance on a few trees, the attack being kept in check through some Strawberry plants on the border becoming infested with them, but "Kilmorie" and applications of cold water afterwards soon stopped their depredations. That fine variety Alexander has become an established favourite here, and although not ripe quite so early as in former seasons, the last of the fruits were gathered during the last week in July. Royal George, Crimson Galande, Dymond, Magdalen and Alexandra Noblesse are varieties well cropped among Peaches, and Elruge is the best among Nectarines. Currants of sorts and Gooseberries in variety have been very abundant and good, and the sawfly caterpillar has been entirely

absent. Raspberries were a splendid crop, and stools of Superlative, fed with superphosphate of lime and potash, yielded exceeding heavy crops of extra fine fruit. This is a magnificent Raspberry, and intending planters who wish for crop combined with size and quality should plant Superlative. In all cases the stools are well furnished with stout canes for next year's fruiting, and these are ripening fast. Strawberries have produced heavy crops of fruit which were of fine size and excellent as regards flavour. Royal Sovereign with me has established its superiority over all others as a first early variety. As Strawberries have to be treated on in a separate note, I will say nothing further about them here, and will conclude by remarking that, taken altogether, the fruit crops, with the exception of the falling off in Apples and Plums and a slight deficiency in Peaches, are, when compared with reports to hand from authentic sources, very satisfactory, when the disadvantages laboured under in the shape of insect foes and frost effects are taken into consideration.

The vegetable crops have been infinitely superior in every way to those of last year, and give occasion for congratulation when the heat and dry weather are taken into account. By supplying plenty of water to all crops that needed it, and with the help of the warm rains which have fallen at intervals through the summer, they have been kept going, and the produce has in consequence been good. Early Peas were ready for gathering a little later than last year, but the crop lasted much longer and was of much better quality. A new early wrinkled Pea named Dickson's Harbinger created a favourable impression, it being ready for gathering with the first early round-seeded kinds, and as regards flavour, it is far and away beyond the latter. Successional crops have been excellent. Early Cauliflowers turned in with the early Peas, and have been plentiful since then, the variety being Waleheren. French Beans have borne good crops, although the earliest were soon over, and the pods have been, and are, tender. The first gathering was made from Earliest of All. Scarlet Runners are plentiful and good, while Broad Beans of both sections have been excellent. Celery is looking very healthy and growing fast, the earliest having had its first moulding up. Onions. Carrots, Parsnips, Beetroot, and Turnips leave little to be desired. Seakale, under the influence of heat and good treatment, has done remarkably well and promises fine crowns for forcing by-and-by. Vegetable Marrows present a different appearance from that of last year, and both these and Ridge Cucumbers have cropped well. With regard to green crops such as Broccoli, Cabbages, and the various kinds of winter vegetables, they are, with a few exceptions, making good growth and are in a satisfactory condition. Lettuces, through being planted in shady positions, have given little trouble all through the season. Continuity has proved a first-class Cabbage variety for a dry season. Sharpe's Victor Potato was again the earliest kind ready for use on a warm border, but I think that English Beauty, which has been on trial here, will run it close for earliness, if it does not beat it, another season. Early Potatoes lost their tops prematurely in many cases through the extreme heat and drought, but the varieties mentioned, also Myatt's Prolific, Early Hammersmith, and Early Regent have, under the circumstances, yielded very good crops indeed. Second earlies are ready for lifting and promise a good yield, and the rains of the past few days will do much towards ensuring a good crop of mid-season and late varieties. The ground is now in fine condition for the sowing of the winter crops of Onions, Lettuces and Spinach, and in a short time the first lot of Cabbages for early spring cutting will be planted.—A. WARD.

**Trelissiek, Truro.**—The fruit crops in this neighbourhood are the worst we have had for many years. Plums, Pears, and Cherries are a total failure; Apples not more than a quarter of a crop, and Peaches about the same. I never saw trees of the latter so badly blistered: some trees

were completely killed by it. This, I think, may be accounted for by the cold, blighting storms of the spring. Gooseberries and Currants were a fair average crop, but Raspberries a failure, from replanting after the severe drought of the previous season.

Vegetables have been pretty good. The Peas suffered somewhat from the extremely hot weather in June and July. Potatoes are a fair average crop.—W. SANGWIN.

**Compton Basset, Wilts.**—The crops here in this district generally are under average with one or two exceptions. Of Gooseberries and Currants we have enormous crops. Raspberries were bad. Cherries are an average crop. Peaches and Nectarines are fine and an average crop. Waterloo Peach was very fine, as was Amsden June. There are good crops of Dymond and Goshawk. Pears are under average; I have had to thin in a few cases. Apples are very poor, only a few in the middle of the trees and under branches where they escaped frost. Plums are very much under average. Apricots were an average crop. Cobs and Filberts are much above average. Strawberries were an average crop, but frost destroyed much of the early blossom.—W. A. COOK.

**Glewston Gardens, Ross.**—Apples here are a very heavy crop. Ecklinville Seedling, Stirling Castle, Golden Spire, Keswick Codlin, and Tower of Glamis are carrying the heaviest crops, and of the dessert kinds Worcester Pearmain, King of the Pippins, and Ribston Pippin are the best. Pears and Plums are a failure. The trees were a sheet of bloom, but the cold wind and frost, of which we had 7° and 9°, killed most of it. Apricots are under average. Cherries a failure. Gooseberries, Currants, and Raspberries were an average crop and good. Strawberries average and good. Nuts over average. Walnuts average.—C. A. BAYFORD.

**Membland.**—The fruit crop in this part is variable. Small fruits were abundant and good. Apples are doing much better than was to be expected. There are fine crops of many of the best sorts. Irish Peach, Lord Suffield, Lord Grosvenor, Gloria Mundi, Cox's Pippin, Stirling Castle, Bramley's, Melon Apple and a few others are good. There are very few Pears, but we have had heavy crops for three years, hence we looked for a light crop. Peaches suffered from blister, but are now clean and making good growth. Plums and Cherries are scarce. Filberts and Cob Nuts are good. There is a shorter supply of Raspberries than usual. This and many other places suffered from the dry season last year, and the growth was short.

Vegetables did well up to July: since that Peas have become more or less mildewed, although a good supply of water has been given to them. Carrots and Parsnips are very fine; Onions also good. I fear the Potato crop will be disappointing. The disease showed itself in the last week of June, the weather being damp and warm at the present time (August 14). The late planted and late sorts are very small; on the other hand, early planted and early sorts are excellent. The Ashleaf, Puritan, Sharpe's Victor, Snowdrop, Windsor and Laxton's Victoria are amongst the best. Britannia is new to me; it is a heavy cropper, of good flavour, very short in the haulm, and not diseased. It should be a good sort for forcing.—GEO. BAKER.

**Oldown House Gardens, Almondsbury.**—The fruit crops in this district are rather under the average, although of some kinds unusually heavy ones can be reported. Apples are an average crop and the trees looking well. Blenheim Orange, Tom Patt, Bess Pool, London Pippin, Winter Nonsuch, and Waltham Abbey Seedling, among orchard trees, are heavily laden, and among trained trees, Cox's Orange Pippin, Annie Elizabeth, Ribston Pippin, and Claygate Pearmain are carrying good average crops. Pears on walls are under average, but the quality appears good and the fruit clean. Beurré Bose, Jargonelle, Easter Beurré, Beurré d'Amanlis, Josephine de Malines, Marie Louise, and Beurré Diel are the

best. Among cordon trees, Beurré d'Anjou, Princess, and Marie Louise d'Ucle are good. Pyramid trees a failure. Of Apricots and Plums the crop is almost an entire failure. Cherries of the sweet varieties are a very scanty crop. Morellos good, the fruit large and trees clean. All kinds of bush fruits have done well, especially Red Currants and Gooseberries, fruit large and bushes free from caterpillars this season. Raspberries very scarce. Strawberries have been remarkably good and abundant. Vicomtesse H. de Thury, Sir Joseph Paxton, President, and Wizard of the North have been the best. Nuts, both Filberts and Cobs, are very plentiful; Walnuts average, some trees heavily laden.

Vegetable crops of all kinds have been good. Early Potatoes, Ringleader, Sharpe's Victor, and Myatt's Ashleaf are good, both as regards quantity and quality. Of the later sorts, Magnum Bonum, Schoolmaster, Windsor Castle, and Snowdrop are good and no disease has yet been seen. Early Peas did well, especially Sutton's Excelsior, Chelsea Gem, May Queen, and Exonian; and for midseason, Duke of Albany, Duchess of Edinburgh, Veitch's Mainerop, and Prodigy have done splendidly. Late sorts are almost a failure, the flowers being infested with yellow thrips and the foliage with mildew. French and Scarlet Beans are abundant. Carrots, Parsnips, and Beet are good. Turnips are poor. Onions are an immense crop, especially Veitch's Mainerop and Sutton's Longkeeping. All the Brassica tribe are doing well.—A. G. HOOKINGS.

**Eastnor Gardens, Ledbury.**—Small fruits generally have been fairly good, considering the late spring frosts. Strawberries extra good. Gooseberries very good. Currants and Raspberries both good. Plums are almost a failure, also Cherries, as we had 14 of frost while the trees were in flower. Peaches are a fair average crop, but were heavily protected. Apricots fair. Pears good average. Apples a very disappointing crop, for the trees generally were in splendid order before the flowers opened, but on opening the flowers had a starved, stunted look, which resulted in a very bad set. Some few trees have a nice crop, but even on those the fruit is undersized and deformed.—FRANK HARRIS.

**Abberley Hall, Stourport.**—The fruit crops in this district this year are very bad. In the spring there was a great show of bloom on all the fruit trees, especially the stone fruit, but owing, I think, to the very bad weather, sharp frosts and snow late in the spring, things went back very much. Apples and Pears are very poor. All the stone fruits are a complete failure, with the exception of Peaches, Nectarines and Morello Cherries on walls, and these seem to have suffered very much from the severe weather we experienced in the spring. Strawberries have been a very good crop, also Gooseberries, Raspberries and Currants.

Vegetables seemed to do fairly well at the beginning of the season, and there have been some fine crops of Peas in this district. Potatoes, I think, will be a good crop.—W. CONWAY.

**The Gardens, Longford Castle, Salisbury.**—Fruit is rather varied, an Apple tree occasionally being well cropped, but on the whole the Apple crop is a light one, the late severe frosts in May doing much harm. Pears are light, and what fruit there is is of poor quality. Plums and Apricots are light crops; Peaches and Nectarines a good medium crop. The Nut crop is a very heavy one. Bush fruit is very good; the earliest Strawberry blooms were damaged, but succeeding ones produced a good crop of fruit.

Vegetable crops vary. The disease in Potatoes seems rather prevalent, doubtless owing to heavy night dews. Peas have suffered much from drought and excessive heat. Root crops, except Turnips, seem to be doing well. The Brassica

tribe all through the entire district seems to have buttoned in very badly, at least 75 per cent. being blind. Onions suffered much from mildew and have gone off badly.—E. F. HAZELTON.

**Wilton House.**—Apples under average, bad in quality. Pears under average. Plums a total failure, except on walls and protected. Cherries under average. Peaches and Nectarines over average, where protected by glass coping quality good. Apricots average where protected, quality excellent. Small fruits under average. Black Currants very scarce. Strawberries average crop, quickly over in consequence of dry weather. Nuts over average and of good quality. Walnuts moderate crop.

Early varieties of Potatoes are a light crop; late varieties strong and healthy and there is



*Lilium giganteum.* From a photograph sent by Mr. C. J. Backhouse, St. John's, Wolsingham, Darlington.

every prospect of a good crop. All vegetable crops are looking well except Cauliflowers and Peas, the former having suffered from the dry, hot weather, and the Pea crop has been much infested with mildew.—T. CHALLIS.

**The Gardens, Garnons, Hereford.**—Apples and Pears are only half a crop in this neighbourhood. Apricots and Plums are a complete failure; also Cherries, except in a few cases. I have a fair crop of Morellos on walls. Gooseberries bore the trees to the ground in this garden. Red Currants and Raspberries good, and Black Currants also good, but not generally in the neighbourhood. In addition to the bleak winds we

had in May, I consider the plague of thrips which has appeared in this neighbourhood for the last two or three seasons is greatly responsible for the light crops of Apples and Pears. They attack the bloom-buds before opening and destroy the stamens of the flower, and on that account it is hard to get rid of, as it is impossible to reach them by spraying.—E. FOX.

## FLOWER GARDEN.

### LILIUM GIGANTEUM.

I SEND you photo of this beautiful Lily which has just flowered in my garden at an elevation of 940 feet above sea-level, in a meadow bed of peat and loam. It grew to the height of 7 feet 8 inches; the flowers were each 5¼ inch across and 7¾ inches long—thirty blooms in on two spikes, white, with purple stripes on side. The stems were each 8¾ inches in circumference. It has been increasing in size several years, making young offshoots, but not flowered till this year. *Incarvillea Davayi* also grows remarkably well here in open, and has had three large spikes of flow this year, seeding freely.

C. J. BACKHOUSE

St. John's, Wolsingham, Darlington.

**Lobelia Gerardi.**—This is an exceedingly free-flowering plant, lasting in full beauty many months. It commenced flowering early in summer, and the main spikes still carry crowns of flower, while lateral spikes are numerous. The colour has been described as azure-blue and also as lavender-blue, but here flowers are not self-coloured, and the general tone seen at a distance is purplish violet. The upper portion of the tube and the two stamens are rosy purple, the lower part of the tube striped rosy purple and white, while the lower petals are pale violet, similar in shade to the common Dog Violet. Judging from its healthy appearance, I should say that it proves the hardiest of all the herbaceous Lobelias and not so susceptible to injury from drought as most of them are. The leaves are large for Lobelia and of a deep green colour, which gives the plant a fresh and attractive appearance when not in bloom. It will undoubtedly prove a good plant for massing.—J. C. TALLACK.

**Rudbeckia laciniata Golden Glow.**—It is disappointing but not surprising to read the notice on this *Rudbeckia* on page 172. Last year I sent from Ireland and elsewhere did not favourably impress me. The glowing terms with which the plant was placed before the public led me to expect prettier flowers than those which came under my notice. They were "lumpy" and heavy-looking, and did not augur well for the popularity of the plant on which they grew. It takes a minute and pretty flower to make itself welcome among the crowd of yellow Sunflower-like plants now available for gardens, and in view of the promising character of the blooms I did not think it worth while to trouble with this double *Rudbeckia*. A day or two ago I had, however, the pleasure of seeing it doing very well in the garden of Mrs. Maxwell-Witham, of Kirkeconnell, Dumfries. The plant was not a large one, but apparently in the best of health, and producing several well-formed and attractive flowers. The colour was good, the blooms more elegant than those of the double Sunflowers. Should it do as well in my garden I shall consider it an acquisition indeed. Possibly the climate may have something to do with its success at Kirkeconnell, and it had the advantage of a well-prepared border and good soil. Possibly the wet autumn we have had in the district may have been acceptable to

it, and have helped to make it do so well. When Glow is distinct from anything else we see in its way, and one can heartily join in the expression of a hope that it may yet prove a success in most gardens.—S. ARNOTT, *Carsethorn, Dumfriesshire, N.B.*

**Primula obovata var. fimbriata.**—At the present time in No. 4 house at Kew a strain of Primula bearing this name is flowering, and at once catches the eye by reason of its distinctive characteristics. Not only is the fimbriated character of the petals very pronounced—which itself is a decided break in this plant—and the flowers usually larger than in original *P. obovata*, but the tube of the blossoms in many instances is of a yellow hue, almost amounting in a few instances to a mealy nature, so much so that at first I was inclined to regard it as indicating a hybrid agency, possibly *P. sinensis* var. This, however, so far as Kew has knowledge of the subject, was negatived a little later in consultation with the curator, the seed having been obtained from the Continent with the above name. That the above strain is highly interesting there is no doubt, and doubly so if, while all attempts to hybridise *P. obovata* with pollen of other species of the genus have proved futile in the hands of leading experts, such a break as this to which I now refer has resulted naturally. There are now several distinct varieties of this Primula in cultivation, particularly *P. o. rosea* is the subject of this note. These in the hands of a careful hybridist should now provide a most useful and welcome variety of this almost perpetual flowering race of Primulas.—E. J.

**Phthalodes Luciliae** is still one of the best as it is also the rarest of beautiful alpine plants recently at Kew in the hardy plant department. I saw this really delightful plant still showing its delicate pale blue flowers. It is, unfortunately, rather difficult to grow as well as in greenhouses, and not unfrequently becomes a victim to slug damage during the winter months. Indeed, in some gardens, even in the summer when supplies for these pests are abundant everywhere, the plant is often attacked, and, alas, once attacked it is rarely left alone while a green remains upon it. Slow in growth, the plant can only be increased by division in early spring, and unless the specimen is at least three years old, it will not avail much to attempt to propagate it. A reference to the plant now may be of service if only to direct attention to the seeds which ripen at this time. These should be watched and secured as soon as fully ripe, and when all are gathered for the year they are best sown in pots. In this way, if the seedlings are raised in a few years in succession, quite a nice stock may be secured, as may be seen when it is stated that upwards of 100 seeds have been secured from a single-sized tuft in one year. It is true, however, that all the seedlings do not possess the clear glaucous tint on the leaves, some are quite green, although varying little in the colour of the flowers. A little peat mixed with loam and finely sifted brick rubbish is the best material to grow the plants in, and also for raising the seedlings.—

**Tufted Pansies in the rock garden in Regent's Park** have been very beautiful during the summer, and quite a new idea in their arrangement is well illustrated. For months past this particular spot has been regarded by many as an ideal illustration of the great value of the Tufted Pansies for work of this kind. Mr. Jordan has discovered the right idea in massing the different varieties by themselves, and in this way has secured some most striking effects. The rock garden here is somewhat serpentine in form, and at the end is massed the pretty little sweet-williams and Violetta, with its chaste white blossoms, next to which is a mass of Bridegroom, a very attractive pale lavender flower with a capital upright habit. Toward the centre, raised higher than the other sorts, is the old variety Countess of Kilmore, with its somewhat tall-growing habit, but eminently suited to the position given to it. Behind, the old yellow sort, has been very

fine, especially early in the season. Blue Gown and Rosca pallida, the latter a very pale rosy blush, are two grand sorts for massing together in large numbers, their dense compact style of growth suiting them admirably for the purpose. There is a beautiful assortment of carpeting plants to cover the rockwork and also to form a contrast to the flowering plants. *Lysimachia aurea*, *Sedums* and *Saxifrages* in variety render this corner of the garden a welcome contrast to the glaring colours seen in many of the recognised bedding plants.—D. B. C.

FLOWER GARDEN NOTES.

**TUFTED PANSIES.**—In response to a complaint made as to non-success last year with Tufted Pansies from cuttings—as a matter of fact nearly 90 per cent. failed—a correspondent, I think Mr. Crane, suggested that a better result might possibly be obtained if the insertion of cuttings were held over for several weeks, and the operation performed in the early part of September instead of the end of July. I am extremely obliged for the suggestion, because having followed it out the result is a capital strike, every cutting coming away at once without the least check. It is not easy to understand why after a successful July strike for many years the failure in 1896 should have been so complete, especially as it was by no means the worst growing season I had experienced. With, however, the knowledge of the conditions most favourable to the free growth of the flowers in question it seems only reasonable to infer that, so far as the outside insertion of cuttings is concerned, the best results would be obtained when the sun is beginning to lose its power, when the ground is naturally moist, and nights are long and cool. Having made it a rule to plant out in autumn, I have resorted to early propagation with the view to obtain early well-rooted plants, but have no doubt the later struck cuttings will produce equally good results. Plants from cuttings are by far the most satisfactory here. They come earlier into flower, individual blooms are finer, and there is a longer season than from old plants either left intact or split up into pieces. So far indeed as the latter process is concerned, it is emphatically the case when growing on a light soil that there are many varieties still classed as Tufted Pansies that are not amenable to this treatment. In any preparations for autumn planting on the above soils I should recommend the incorporation of a goodly dressing of cow manure; given this and a heavy surface mulching to follow planting, there is little doubt but that a satisfactory display will be obtained. Perhaps readers who have tried some of the newer varieties will say which are the best selfs among them—that is, from a flower-garden standpoint.

**SOME USEFUL ANNUALS.**—The present season has again shown the value of some of the best types of annuals, and proved that by their aid, allied with perennials, a splendid summer display can be maintained. Although the many different types and varieties of Pentstemons advertised can if necessary be treated as annuals, that known as *Gloxinioides* is about the best for growing in this way, from the fact that it comes into flower so quickly and makes a grand display quite early in the summer if the seed is sown in a little warmth towards the end of February, and the young plants are grown on without a check under shelter until they can be transferred to the open. *Gaillardia Lorenziana* may not be quite so bright or attractive as the single types, but it is a very serviceable annual and of a most enduring character. The flowers are produced in great profusion on fairly long stalks, and stand up better than the majority of the singles. There is also great variation in the shades, although the brilliant colouring is somewhat lacking. Plenty of flowers is available until the advent of frost and they stand very well in water. To ensure an early display, seed should be sown under cover about the middle of March and the young plants pricked out in frames or boxes. *Calendula Orange King* is one of the best substitutes as a fairly tall

plant that can be found for *Calceolarias* where the latter are not satisfactory. Complaints are sometimes made as to the non-enduring powers of this very handsome Marigold, but the short season is generally attributable either to growing in a poor dry soil, to the non-removal of dying flowers, or to both causes combined. I am aware that this and other flowers are sometimes recommended for poor soils, but there is a medium in all things; and although willing to admit that it does not require a rich compost, I have had the best results from a fairly holding soil, and for that reason generally fork in a heavy surface dressing of rather stiff road-sidings to beds that are to be tenanted with this *Calendula*. The plants luxuriate in this when the roots once find it out. So far as the prompt removal of dying flowers is concerned, it is as much a necessity in this case as with Tufted Pansies and Sweet Peas if a long-sustained season is desired. The seed may be scattered broadcast over the bed and the plants thinned to 1 foot apart. If a mulch of spent Mushroom manure or something of the kind can be put on while they are yet in a young stage it will be decidedly beneficial. Among the newer introductions to summer gardening, at any rate on an extensive scale, may be mentioned *Celosias*. A splendid display is to be found this year at Regent's Park, where Mr. Jordan has used them largely and in excellent taste. Now that individual colours are fairly well defined, it is advisable to purchase them separately, and arrangements can then be made for planting on a carpet that will best harmonise with each colour. Ranking among the most tender things that are utilised for summer work, it is obvious that early sowing, quick growth up to a certain stage, and a long hardening off are absolutely essential.

**CARNATIONS.**—We have had showery weather, or, at any rate, occasional showers, right away from starting Carnation layering, and artificial watering has been unnecessary. The plants—as is generally the case under such conditions—have come away at once and are looking remarkably well. Is there something in soil and in atmospheric influence, or in both combined, that is responsible in a great measure for splitting tendencies. I ask because the late flowers of Mrs. Reynolds-Hole have been remarkably good, the calyx holding intact to the end. This seems to indicate that the cool, showery weather has something to do with the improvement. What, however, makes me think that a difference of soil is also responsible is the remark made by a grower from a south-midland county. I had directed his attention to The Pasha and Carolus Duran, and he immediately said that he did not want a better in that shade than Mrs. Reynolds-Hole, and to my inquiry as to whether that variety did not split badly, added, not five per cent. It would be interesting to know if others have had the same experience, and, if so, to what they attribute their success. Of a few sorts comparatively new to me I like Lady Nina Balfour, Miss Audrey Campbell, Sadek and King Arthur, as in addition to flowering freely they make strong grass, and the layers have a robust, healthy look about them. It remains to be seen if these and a few more new sorts will come through the winter as well as the old favourites. Where a considerable number are required for indoor work, the sorts named above, together with Uriah Pike and a good form of White Clove, will be found useful for the purpose, and a sufficient number should be potted as soon as the layers are well rooted. If any particular shade in the named varieties is not looking well it is advisable to layer some of the seedlings if the desired colours can be obtained in them. I am this year trying three that proved very free and vigorous, and that were respectively in their several shades almost the counterparts of Miss Jolliffe, Ketton Rose and The Pasha. Where good seedlings exist and the ground is not required for other purposes they will make a grand show another season if allowed to remain. The ground between the plants can be gently eased up with a fork and a bit of fresh soil, say about 2 inches in thickness, spread over the surface. All

thin weakly growth can then be removed and sufficient of the strongest shoots from each plant pegged down into the fresh soil to cover the bed well. A splendid lot of flowers will be obtained from such beds another season.

**MICHAELMAS DAISIES.**—Among good kinds now in flower are *Aster acris*, *Amellus major*, *cordifolius*, *lævis*, *arcturus*, *Novi-Belgii*, *Purity*, and *Shorti*. The two first named being comparatively

instead of relieving it. The other four *Starworts* are capital border plants and also very useful in a cut state.

E. BURRELL.

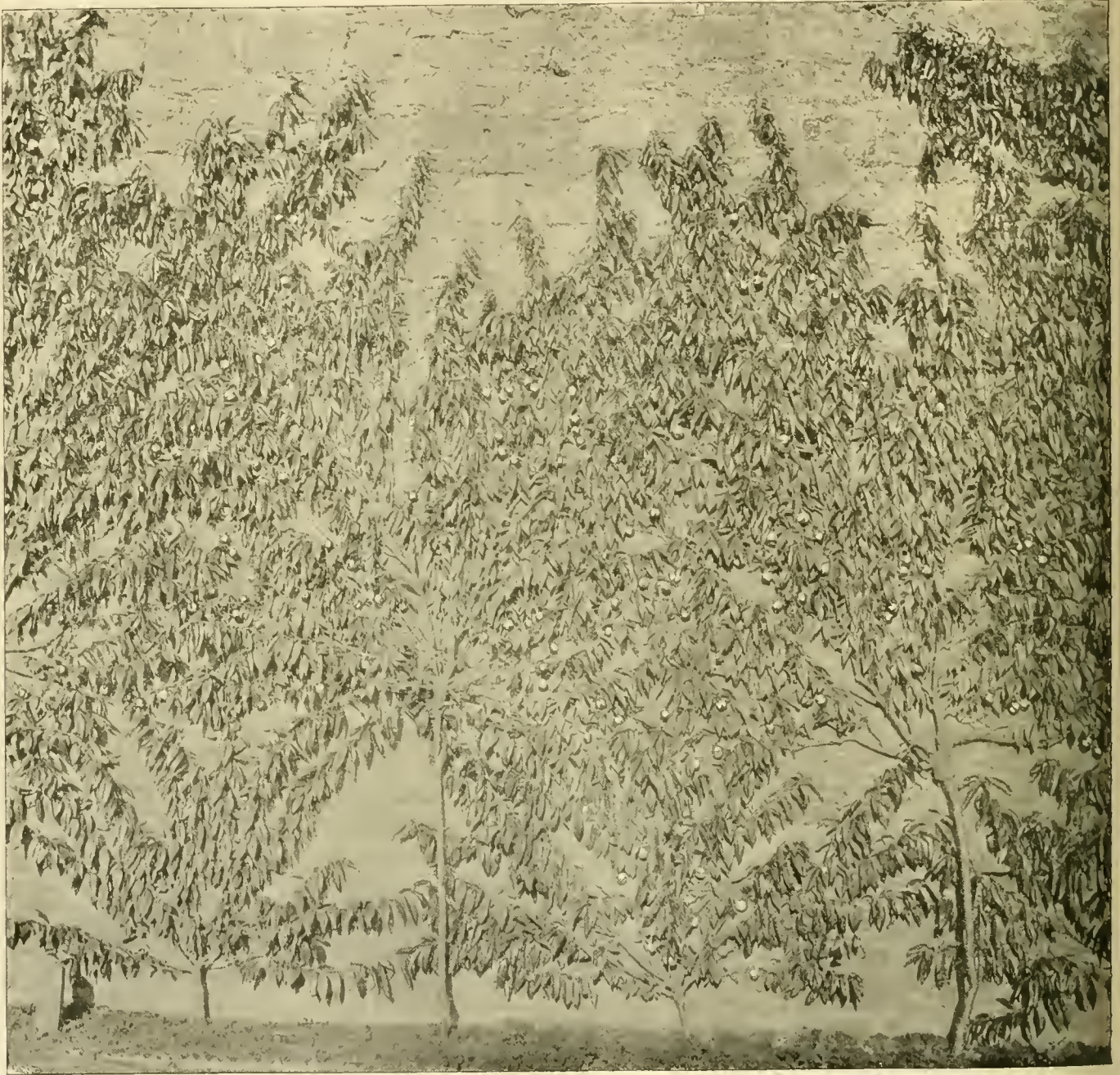
*Claremont.*

**Montbretias.**—The note of "E. J." (p. 191) on *Montbretia Tigridia* reminds me of a fine group of this showy flower I saw growing at Carrow

## ORCHARD AND FRUIT GARDEN.

### PEACHES AND NECTARINES AT EXETER.

THE wall on which the Peaches and Nectarines are growing is our boundary wall, and belongs to the gaol authorities. It is 24 feet high, and at



*Peaches and Nectarines on a high west wall at Exeter. From a photograph sent by Messrs. Veitch, Exeter.*

dwarf and compact, and throwing dense heads of flower, are suitable for massing in large beds only. As they are somewhat stiff and formal, it is advisable to relieve them with other things. Perhaps there would be nothing better than *Dahlia Flambeau*, a variety that throws its flowers well above the foliage, and is unapproachable as a free bloomer. *Desgrange Chrysanthemum* is sometimes used and is satisfactory so far as contrast of colour is concerned, only it intensifies the formality

House. At a time when good flowers suitable for vase decoration are becoming scarce the above will be found invaluable, one good point in its character being the long time it lasts when cut. It looks exceedingly well arranged with *Gypsophila paniculata*. The best way to secure a good annual supply of flowers is to keep working up a young stock of plants and to plant in good soil. To prolong the supply of spikes for cutting, plant a batch of roots on a north border.—GROWER.

special spot is built of limestone; at other places it is built of brick. The aspect is due west, and owing to large buttresses and recesses the sun falls on the wall until between 11 and 1 o'clock at this time of the year. The Nectarine tree photographed is Lord Napier, and is about 12 feet high by 8 feet to 10 feet wide. It has borne heavy crops of fruit without intermission for the past ten years.

standard Peach tree shown is Dr. Hogg, and is 16 feet high by 16 feet wide, and has been growing there for more than twenty years. The dwarf Peach is Dymond. It is 12 feet by 12 feet, and is of the same age as the Dr. Hogg. These two trees have been exhibited by us full of fruit regularly for many years to our friends who attend the horticultural show at Exeter, which is usually held on or about August 20. Other trees on the wall are Bellegarde Peach, Pineapple Nectarine, Walburton Admirable Peach, which is bearing a fair crop this season, and Late Venonian Peach, of which there are several trees, one bearing heavily. With reference to treatment, we give the trees plenty of clean water and liquid manure at the usual times, but we give them special treatment in the spring from the time the buds begin to swell to the time they are in bloom by giving them copious waterings with clean water and now and then a drop of liquid. We root-prune them every third or fourth year, laying out the fibres near the surface in good loam and lime rubble. The result has been that we only occasionally get a crop in the leaf, none at all this year, and almost invariably get a good crop. From our examination of the soil under our walls for many years past, we are satisfied that it is often drier than one would expect, and that many trees suffer from dryness at the root, especially during dry weather in March and April, such as was experienced last year and this year.

ROBERT VEITCH & SON.

**Nectarine Cardinal.**—The exceeding earliness of this new Nectarine, coupled with its extraordinary colour and pleasant flavour, is sure to make it a favourite with those who require Nectarines early in the year. As grown in a pot this season at Carrow House it was very prolific, and earlier than the Early Rivers. It is a significant fact that all the early Nectarines are much freer setting than the early American Peaches, Amsden June, and Cardinal is no exception to the rule.—GROWER.

**Japanese Wine Berry.**—It is surprising that this fruit is not more generally grown, as it makes a most delicious preserve and is easily cultivated. At Carrow House Mr. Jones has it in a very fruitful collection, the clusters of Mulberry-like fruit hanging in great profusion. It enjoys deeply-worked, rich ground, and new beds should be made every few years. The general treatment it requires is very similar to that of the Raspberry. The fruit is Mulberry-shaped and produced in clusters. It is necessary to net the fruit over to protect it from birds, which are as partial to it as to raspberries.—GROWER.

**Apple White Juneating.**—One looks in vain in fruit catalogues for the above old-fashioned early Apple. Thirty years ago there were a good many orchard standards of the White Juneating in Sussex, but most of them were very old, and as they have disappeared, young trees have not been planted in their place. A Norfolk gardener markets his surplus fruit recently asked me if I could inform him where he could obtain trees or grafts of it. He had never seen it since he lived in Suffolk many years ago. I could not help him although I have a good espalier tree which never fails to bear a good crop of fruit, this ripening at the end of July. The flavour is brisk, juicy, and refreshing, though it is not one of the sweetest. It must be eaten within ten days or a fortnight after gathering, otherwise it becomes mealy and tasteless.—J. CRAWFORD.

**Black Currant Lee's Prolific.**—Without doubt the finest of all Black Currants, all points considered, is Lee's Prolific. The old Black Naples is excellent, but the former, while being equally as prolific, is much larger in the berry and the quality unsurpassed. There are several other varieties in existence having larger berries even than Lee's—Dunnet's Champion, for instance—

but they are such poor bearers that where profit is aimed at they do not pay to grow. For exhibition a few trees may well be grown, as fruit of Dunnet's Champion is often as large as small Cherries. I find Lee's Prolific is being largely planted in East Anglia, and market gardeners seem to be working up a stock. The fact of the latter class of cultivators taking to any fruit or vegetable is sufficient proof of its value. Many gardeners still prune Black Currants, so as to encourage dense, stumpy bushes, instead of opening out the trees to let in air and sunshine and encourage plenty of young wood.—GROWER.

#### OUTDOOR PEACHES.

This is unmistakably a Peach and Nectarine year, and the fruit is all the more appreciated because of the scarcity of dessert Plums and early Apples and Pears. I do not know how it comes that we are apt to regard Peach blossom as exceptionally tender and make its covering the first consideration, unless it is that the choice nature of the fruit prompts attention. As a matter of fact, it is not so tender and will bear with impunity frost that would be fatal to Plums, Cherries, and Pears, and the small-flowered varieties are a trifle hardier than the large. Waterloo and Hale's Early are the two best early Peaches if one looks to the combined properties of size and flavour. Others may be as good or better on other soils, but these are my best and most reliable sorts, and by planting one or two trees of the latter on a west aspect, a succession of fruit is secured until Early Grosse Mignonne and Alexandra Noblesse come in. Both these are first rate. Alexandra Noblesse has the reputation of not cropping over-well on some soils, but I have no fault to find with it in this respect. Early Alfred is a capital indoor Peach, but is not a success outside with me; both fruit and foliage mildew badly. Royal George is the most unsatisfactory of all, and, bearing in mind that Peaches, as a rule, do well, and that this particular variety in some places is exceptionally fine, I have come to the conclusion that there is a Peach in cultivation sold under this name very different from the true form. This particular tree is just about in the centre of a mixed Peach and Plum wall about 100 yards long, and whilst all other trees are clean and healthy, this for the last three seasons has been simply covered with mildew, both foliage and fruit, the latter, it is almost needless to add, under such circumstances being only third-rate alike in size and quality. I have endeavoured to alter this both in helping the tree at the root with winter dressings and early applications of sulphur, but all to no purpose. My patience is at last exhausted, and the tree will have to come out. One of the finest outdoor trees of Royal George I have seen is on the Peach wall at Cowdray Park, and Mr. Geeson speaks of this and Dymond as about his most reliable mid-season Peaches. It covers 400 square feet of wall, and there must have been at the time of my visit nearly the same number of large, highly-coloured fruits. I failed to detect the slightest sign of mildew. A Peach that every grower has a good word for cannot but be one of the best, and this may be said of Dymond. It has a splendid constitution, is a certain cropper, and the fruit is large and of excellent quality. Where it does well one wants no better Peach in its season than Noblesse, and I find Violette Hative and Bellegarde very reliable sorts. The three best varieties with me are Barrington, Princess of Wales, and Walburton Admirable. As in the majority of cases where Peach culture is practised on a light sandy soil, red spider is one of our worst enemies, and requires constant attention to keep it in check. A great point is to grapple early with the pest. A close watch must be kept, and copious washings of clear water with an occasional dose of quassia extract given as soon as it makes its appearance. An equally dangerous enemy is the earwig, and the remark in connection with spider, *i.e.*, waging an early warfare, is applicable. It is no use waiting until the fruit is approaching the ripening stage: the colonies must

be dislodged while it is yet hard. In looking along the Peach wall at Cowdray, I found that Mr. Geeson had discarded the familiar bean stalks in favour of 6-inch lengths cut from the smaller canes of *Arundo donax*; these answered the purpose admirably. The inner surface is quite smooth and the lengths being perfectly straight, the insects can be blown out much more easily. Where there are facilities for planting a few clumps of this stately plant in outlying parts of the pleasure ground, the stems that are annually cut can be utilised for the above purpose.

E. BURRELL.

**Open-air Figs.**—The severe winter of 1894 crippled and in some instances killed to the ground open-air Fig trees. Some, however, in sheltered situations, were not so badly punished, and it is pleasing to find these old specimens again bearing good fruit. East Anglia has always been noted for its outdoor Figs, the Brunswick being met with even more frequently than Brown Turkey. Near Cromer I saw some remarkably fine Brunswick Figs the last week in August, these reminding me of the luscious examples one used to see about Arundel, in Sussex. Some gardeners seem to be opposed to covering Fig trees in winter, but, after seeing so many damaged and ruined trees caused by the extreme frost of the above winter, I have no doubt as to the wisdom of giving protection. Allowing a thicket of wood to form during summer is a great evil, as this prevents perfect maturity of the wood and gives frost a chance of injuring the trees in winter.—J. CRAWFORD.

**Apple Kentish Fillbasket.**—This is an exceedingly free-cropping cooking variety, which grows to a large size and keeps in good condition until the end of the year. It is somewhat like Beauty of Kent in appearance at first glance, but there is a slight difference in shape, Fillbasket being the rounder fruit of the two, and it generally becomes more highly coloured. In texture of flesh and flavour there is not much to choose between them, and if I were confined to growing but one of the two kinds, I should give Fillbasket the preference, as it is not so apt to spot as Beauty of Kent. The tree is a good grower and succeeds either as a standard or bush. Grown as a low bush and kept summer-pinned, it would prove suitable for growing in suburban and cottage gardens where space is restricted. As a standard it should not be planted near the outskirts of the orchard, on account of the loss of fruit likely to result from autumnal gales of wind, through its large size and weight.—A. W.

**Peach growing at Carrow House.**—A few years since a Peach house was erected at Carrow House, the form being a rather lofty lean-to with high front lights. A trellis tolerably close to the glass was fixed from the top a certain distance down the roof, standard trained Peaches and Nectarines being planted to furnish these, while from near the front lights to where the above-named trellis terminated were fixed, crossways of the house, espalier-like trainers some 5 feet or 6 feet apart; in the centre of each a Peach or Nectarine was planted. Thus a great variety of both Peaches and Nectarines was secured in the one house, and the plan of training has answered admirably. I remember seeing a good-sized house planted on the crossways system near Birmingham, and those who have only one house and wish for variety would do well to give the system a trial. I have heard it condemned on the score that sufficient sun and light could not reach the trees, but that this is more imaginary than real is evidenced by the fruitful state of the trees at Carrow.—J. CRAWFORD.

**Sad end of a giant Apricot tree.**—The *Revue Horticole des Bouches du-Rhone* mentions the disappearance of an Apricot tree nearly a hundred years old, which was the pride of an orchard at Hyères. The stem of this giant measured 9 feet 2 inches in girth. Its branches extended over a circular area nearly 50 feet in circumference, and under their shade twenty-five

persons could shelter themselves from the sun. It has borne nearly four tons weight of fruit in a season, and the crop has often been sold, on the tree, for 500 francs (£20). The tree, which was of the variety named Abricot Royal, was a chance seedling, and was planted out seventy years ago. With advancing age part of the trunk had become hollow, and a colony of hornets took up their abode in the cavity. Lately, the owner, wishing to get rid of these troublesome tenants, placed some burning sulphur in the mouth of the cavity in order to smother them, and having finished the operation went away, thinking he had made a good job of it. Unfortunately, however, during the night the fire, which lay smouldering in the interior of the tree, being fanned into activity by the rising wind, totally consumed it, and next morning where the tree had stood nothing was to be seen but a heap of ashes. The owner is said to have been quite stunned by the occurrence, and he had good reason to be so.—*Revue Hortico.*

**Notes from Monmouth.**—With me, and I believe in Monmouthshire generally, this has been a somewhat peculiar year. Until the early part of May there was every prospect of a remarkably good season. Plums, Pears, Apples, Cherries, &c., were one mass of bloom, but frost suddenly appeared after an extraordinarily mild winter and destroyed our hopes. I escaped fairly well except with Cherries, Plums, Gooseberries and Currants, and wall fruit generally, which have been poor. Pears are an indifferent crop. Apples are fairly good, but they are falling off, the maggot having attacked them. Figs are abundant, especially the Brown Turkey, but they are later than last year; the same with Filberts and Nuts. Melons, thanks to the sun, have also done well, though I fear the cold, wet weather we are now having will injure the fruit which a week back looked so promising. Strawberries were good, but did not last long. I grew twelve sorts, but next year shall, from experience, confine myself and rest satisfied, I hope, for a while at all events, with the following six for outdoor: Royal Sovereign, Vicomtesse H. de Thury, Sir Joseph Paxton, Veitch's Perfection, Latest of All, and Waterloo; and for indoor forcing, Royal Sovereign and McLean's Wonder, though the latter was this year disappointing. Noble I have always found very poor and have discarded it. To my mind, the very best Strawberry I have or have seen in this county is undoubtedly Royal Sovereign. Late Potatoes at present show no signs of disease, though I fear the continuous rain we are now having will affect them. Globe Artichokes, which do so well generally with me, are not so good as usual. As a rule vegetables generally, especially Peas, have been most abundant.—*G.WENT.*

**Fruit at Kimberley Park.**—So far as shelter and position are concerned, few gardens are so favoured as the one at Kimberley Park. In spite of this, however, Apples are this year as scarce as in other gardens less sheltered. The only variety bearing a good crop is one called the Lyon, a local name most likely, as I never remember hearing of it before—a medium-sized Apple, of good appearance and colour, and useful for both dessert and cooking. At Kimberley, the smaller finely-flavoured varieties of Pears seem to find most favour, such sorts as Doyenné du Comice, Josephine de Malines and Glou Morceau receiving every attention, and paying for it by the prolific crops the trees are yielding. Pot Strawberries are well done. Mr. Wainwright making a rule of potting two plants into an 8-inch pot for successional work. I noticed a very healthy batch of Gunton Park treated in this way, and the results are most satisfactory. I have often thought that pot Strawberries intended for ripening their crops in April and May are generally confined in too small pots to give the plants the best chance, and that by having more soil to root into and being less pot-bound, better results would be obtainable. Of course, with very early batches that are introduced into heat say in November and December the case is different, as these are brought on

with less sun-heat, do not make so much top growth, and are far more easily kept moist at the roots. In the vineries at Kimberley, which are planted mostly with Hamburgs and Muscats, I noticed a remarkable Black Hamburg sixty-three years old with an enormous stem and carrying a magnificent crop of good-sized well-finished bunches, as good, in fact, as those borne by young Vines in adjoining houses. Filberts, as in most other gardens where they are grown in Norfolk, may be gathered by the bushel.—*C. C. H.*

#### SHORT NOTES.—FRUIT.

**Pears Beurré d'Aremberg and P. Sterckmans.**—Will some of your correspondents who have grown the Pears named below kindly give their opinion of them as to cropping, flavour, and if they ripen satisfactorily? 1, Beurré d'Aremberg (Pear stock); 2, Beurré Sterckmans (Quince).—*B. ADDY, Southport.*

**Plague of wasps.**—In this neighbourhood we are quite over-run with wasps. To-day I started five men in search of nests, and within the space of two hours they found no less than nineteen nests, all within a quarter of a mile of the fruit garden. To-day I was examining a Pear Beurré d'Amanlis and I found no less than twelve wasps inside of it. What can one do to protect the fruit under these circumstances? The wasps start on the fruit long before it is ripe.—*JOHN BUTLER, The Gardens, Normanton Park, Stamford, September 13.*

#### NOTES OF THE WEEK.

**Begonia gigantea.**—I send you one leaf, a spike, and a bud of this raised by M. Nouin. It is a most beautiful decorative plant, the truss of flower being double the size of that sent and very singular.—*D. GUIHENEUF, 48, Rue St. Merri, Paris.*

**Heliopsis lævis.**—For cutting, the well-formed blossoms, of a decided orange-gold, should prove even more useful than the larger Sunflowers, as the flowers are borne on good stems of a nice length, while the foliage is also smaller and neater generally.

**Fuchsia simplicicaulis.**—A large specimen of this old species in one of the greenhouses at Kew is at the present time loaded with trusses of its long drooping flowers. The tube is very small, of considerable length, and imparts a somewhat unusual appearance to the plant.

**Aster spectabilis.**—This is one of the North American Starworts, flowering in company with the Italian kinds. It is not quite 2 feet high, with masses of blue-lilac flowers, the latter of good size individually. It is a free grower and good bloomer for early September work.

**Lobelia splendens** (Winchmore Hill var.).—This is certainly a handsome as well as telling form, the colour of the blossoms a deep vermilion-scarlet, and freely produced on blackish purple stems nearly 4 feet high. It produces a most brilliant display when seen in quantity.

**Helenium nudiflorum** is now in its fullest beauty, and for the large border its fine panicles of bloom are very showy. It is surprising what a number of flower-heads is produced in one large panicle on a single stem, while the distinct shade of colour is very acceptable at any time.

**Asclepias incarnata pulchra.**—This pretty form has been in good condition in Mr. Perry's nursery at Winchmore Hill. In habit and general aspect of the inflorescence it resembles the species, while the much-branched heads of flowers are of a purplish rose hue and very distinct.

**Colchicum speciosum.**—This fine bulbous plant is flowering splendidly in the rock garden at Kew, the blooms of exceptional size and vigour, as may be expected from established bulbs. Not far away a bold group of *C. byzantinum* is also very effective, but in point of size and fine colour

all pale when compared with the handsome kit above named.

**Aster acris**, with its cloud of pale blue star blossoms, is certainly one of the finest of the race, the mass of blossom produced being real marvellous. Its full height is about 2½ feet, and coming early in September, is particularly valuable. In its flowering it is even before the Italian kinds.

**Aster Amellus.**—Apart from the intrinsic beauty and value of the flowers of this Starwort we have also the very important addition of new attractive foliage—a plant, indeed, in all its forms far removed from the weedy rubbish that for years was regarded as representative of the Starwort family. The above species deserves extensive culture and is effective for a long time.

**Dendromecon rigidum.**—This beautiful member of the Poppy family is in flower at Kew where it is planted against the wall of a green house. The blossoms are of a clear deep yellow and very attractive. Its perfect hardiness, however, in this country is doubtful, and for the time being a slight covering at the root during severe weather may assist in bringing it through winter of moderate severity.

**Anemone japonica Whirlwind** is a very distinct variety of the Japanese Anemone, possessing a sort of Hen-and-Chicken-like arrangement in its flower-buds in the way these last surround the central flower, which is of the same colour as in the well-known white form of the plant. These smaller buds are, moreover, quite numerous, while the complete head of blossom produced on exceptionally stout, vigorous stems each about 1 foot in length.

**Punica Granatum nana.**—The Pomegranate in flower in this country is not conspicuous either for its frequency or the number of flowers. At the same time, the colour is exceedingly brilliant and very showy if only a few flowers are open at a time. Just now the dwarf form mentioned above is giving a few blossoms. Kew on the Orchard house wall. Some years ago I remember seeing the taller form flowering freely in the Oxford Botanic Garden.—*E. J.*

**Flowers from a Surrey garden.**—Mr. Wilson sends us from his garden at Weybridge some remarkably fine flowers of the *Gentiana*, the sweet-scented *Linnaea borealis*. The soil Mr. Wilson's garden, as also the rains we have recently had, have no doubt helped these flowers, which, coming at the present time, are valuable in the open-air garden. Mr. Wilson also sends some leaves of *Shortia galacifolia*, which is very highly coloured for so early in the season.

**Rosa canina var. dumetorum.**—The splendor upon this variety are now very attractive. The collection of Rose species at Kew is nothing among this numerous collection to be compared to the variety under notice for the brilliancy of its seed-pods. I am not acquainted with the flower, but I certainly think it is worth growing if only for its beautiful fruit. The petals are of the clearest scarlet-crimson, oblong in shape and each about 1¼ inches in length.—*PILLOMET.*

**Agave vivipara var. nova.**—A beautiful marked plant of this scarce kind in the collection at Kew cannot fail to attract attention by reason of the nearly milk-white shade of its rather narrow leaves. This peculiar shade in greater or less degree is spread over the whole surface, though its greatest density is from the margin inward. In most kinds the variegation is of a yellowish golden hue, disposed either centrally or at the margin, or both, in which case much green appears. In the above, however, the white shade covers a good portion of the leaves.

**Berkheya (Stobæa) purpurea.**—A very distinct Thistle-like plant of South African origin that does not appear to gain much favour in gardens in spite of its many attractions. It is capital plant for a hot and dry soil. This species is now flowering at Kew, where the plant is nearly 4 feet high, much branched and freely flowered. The ray florets are of a lilac-purple

shade. The radical leaves are of large size, while the whole plant is very spiny. The species may be readily raised from seed, and if grown freely would make a capital plant for the wild garden.

**Gazania longiscapa.**—This species differs materially in the manner of producing its rich golden blossoms from the other members of this showy race by the exceeding length of the foot-stalks. These are each more than a foot in length, and bear at the extremity one very large and handsome flower of rich orange-gold about 3 inches across. The shade of colour is peculiarly striking and brilliant, and with many blossoms expanded very attractive. The flowers spring from a tuft of long linear leaves, each about 1 foot long, green above and silvery on the reverse side.

**Physalis Franchetti.**—Any gardeners who are in doubt concerning the value of this handsome Japanese plant should, if possible, pay a visit to Kew, where two beds in the herbaceous ground are devoted to it. The species is of erect growth and attains 3 feet to 4 feet high, flowering and fruiting profusely. A day or two since, when inspecting the plants, we noted that many of the earliest of the huge bladder-like calyces were already finely coloured, the rich orange-scarlet shade being very showy. Some of the larger calyces would be three times the size of those of the better-known kind.

**Kniphofia Nelsoni.**—In the whole of this arid and extensive family of hardy plants it is very doubtful whether any species or variety can surpass this in its brilliant colour, as also its great freedom of flowering. In these respects the plant appears almost unique. Less tall and robust than the majority, the established plants are not more than 3 feet to the tip of the tallest spike. The plant is quite large enough, however, to be extremely useful, the vermilion-scarlet of its long tubular flowers being most effective. In growth generally it may be compared with *K. laciniata*, though slightly taller, while the colour is unique.

**Coris monspeliensis.**—A miniature rock plant of procumbent habit, that bears some resemblance to the *Ethiomas* in the habit of growth, though quite distinct in flower. The violet-coloured blossoms are borne in elongated terminal heads, in which the orange anthers are conspicuous. It is only suited to the warmest and sunniest positions in the rock garden, requiring sandy peat and loam with ample drainage. The proximity of a portion of rock would afford some protection to a pretty, though not over-robust nature. Happily, it is readily raised from fresh seeds, and such when obtainable should be sown at once.

**Meadow Saffrons in grass.**—That the meadow Saffrons, as the *Colchicums* generally are properly called, should find a congenial home in the grass is not surprising; indeed, they appear content here as in the border. At the same time the grassy blades from which they spring in some degree compensate for the absence of their foliage at flowering time. Bolder in the masses of their blossoms than the *Crocus* in spring, these things give a welcome tone of colour in many spots that would otherwise now be empty and bare. The white and pink forms of *C. autumnale* are not only free-flowering, but may be had at a very cheap rate also, which permits of planting freely.

**Zephyranthes Atamaseo.**—A group of this pretty bulbous plant is now in flower near the orchid house at Kew. The plant is used as an adjunct to some rare bulbs and other things, and the pure white blossoms appearing so freely from the almost grassy bed of leaves make a very pleasing display. The blossoms individually are unlike those of the *Crocus*, only larger and spongy, while the dark green roundish leaves fling away from the blossoms prevent these being besmudged with dirt. The plant is so nearly akin to evergreen, that it is worth using much more freely in some such spots as this, either in the woodland, on grass, or in the rock garden. In any such position where it may re-

main permanent for three or four years and its blossoms receive protection, the snowy flowers at this time are always pleasing.

**Abutilon megapotamicum** (syn., *A. vexillarium*).—This very distinct species is now in flower at Kew, where a large plant is trained to the wall of the economic house. It is a singularly graceful and beautiful species for a position thus protected, though scarcely sufficiently hardy to succeed generally in the neighbourhood of London. In more favoured parts, as the Isle of Wight and the south of Ireland, this species is more content in the open, where it is invariably admired. The blossoms are quite distinct from those of the better-known members of this race, and inclined to a tubular or bell-shaped outline, the sepals of a dark crimson, and petals of a golden hue.

**Polygonum orientale.**—A very striking and effective species for planting in bold groups, particularly in newly-made gardens or the like where a quick effect is desired. Though only of annual growth, it is certainly one of the most showy of this genus. In lieu of the usual creamy-white flowers so common in the members of this family, the blooms are deep rosy-purple, and produced in long drooping racemes both terminal and axillary. The effect of a handsome group is very striking, the giant plants reaching to 8 feet high or more. A native of the East Indies, it has been known to botanists well-nigh 200 years, and is still a valuable plant for the mixed border. A fine group may now be seen at Kew.

**Encomis punctata.**—Three years ago I was given a plant of this. Until it flowered, neither the giver nor myself knew its name. Having been told that it was a kind of Orchid, I put it into a small stove house, where it grew vigorously and at last threw up its bloom. I divided the plant, and have now eight. This year it has bloomed out of doors, each of the two plants that I experimented on having flowered. I now have in my room one bloom picked August 12; it is a good 13 inches long, and still retains its colour to a certain extent. I have grown these out of doors against the wall of a conservatory facing south and west; the plants look perfectly healthy, and I believe, given a warm situation, they will do well out of doors.—*M., Haunts.*

**Amaryllis Belladonna.**—A grand display of this handsome bulbous plant is now to be seen in the Royal Gardens at Kew. Perhaps the most conspicuous, though not the only lot is that outside the Orchid house, where something like a hundred or more spikes in all stages are to be seen. Some of the strongest heads have close upon two dozen buds and blossoms, which in itself means a long season of flower. While some of the flower-spikes are only just clear of the soil, others are even passing out of bloom, while in intermediate stages there are numerous examples. Not the least pleasing and attractive feature is the infinite variety both of colour and size of blossom that is to be seen. In the irregular grouping as here seen the plants have a most lovely effect. In such a beautiful display it would seem impossible to desire anything further, and, so far as flowers go, nothing really is needed. At the same time in such an arrangement a little foliage of some kind at flowering time would be of great help, and, thinly disposed among the spikes, should give additional charm to the whole.

REMOVING A BOILER.

YOU very courteously in your number (August 28) of THE GARDEN answered my query about the expediency of removing my boiler, subject, however, to my describing the "kind of boiler in use." It is a plain saddle boiler, and the exact number of feet of piping is 640 feet.—*A. A. W., Holme Grange, Wokingham.*

\* \* \* A boiler of the size you have fixed, this being capable of heating several hundred feet more of hot-water piping than are already attached to it, cannot be quite so economically worked as one four sizes smaller. Much in any case, how-

ever, depends upon the stoking. There is no necessity to fill the interior of a boiler with fuel every night, thereby burning it to waste, overheating the houses, and doing more harm than good. Good stokers, or those who keep their flues clean and their dampers and ash-pit doors in good working order, can by a judicious use of the latter make 2 cwt. of fuel go as far as reckless stokers can 3 cwt. At the same time, I am of opinion that plain saddle boilers are not the best that can be selected, and if much larger than needed for the amount of piping attached, are decidedly extravagant. If "A. A. W." decides to have a smaller boiler in the place of the old one, I should recommend a "Chatsworth" or some other saddle boiler with a water-way back and flue through top. Size 10 would be equal to heating about 680 feet of 4-inch piping. This size would be 42 inches long, 20 inches wide, and 25 inches high, and could, therefore, be easily fixed in the position occupied by the old one. It would be found a somewhat expensive boiler, but the saving in fuel would soon compensate for this outlay. The amount of fuel it would burn in a year cannot very well be given. It is all a question of local circumstances. For obvious reasons no particular firm of hot-water engineers can be recommended. Any of them could supply and fix the boiler named.—*W. I.*

— If "A. A. W." (p. 168) will look up his old numbers of THE GARDEN he will find the question of boilers discussed in connection with the relative merits of anthracite coal versus coke in the autumn of 1896. If, however, these numbers are not to hand, it may meet the case to state briefly that too large boilers are just as great a mistake as when they are too small, and that even when the heating power of two particular types is guaranteed at about the same figure, he would find for the amount of piping stated that a 36-inch Chatsworth would answer his purpose better than a 48-inch plain saddle, although, if the smaller boiler is used, I should recommend the substitution of anthracite for coke unless the latter can be procured very cheaply. It is difficult for the best stoker to work an over-sized boiler economically, for the simple reason that sufficient fuel has to be employed to get a good heat all round, and a natural inference is, that the greater the interior dimension, the more fuel will be required.—*E. BURRELL.*

SOWING TULIP SEED.

HAVING saved a quantity of Tulip seed, I should feel obliged if you will inform me if I should sow it now or when. I should also be glad of full particulars as to treatment of seedlings.—*W. M., Bognor.*

\* \* \* Tulip seed may be sown at any time during the month of October or early in November. At the time when the bulbs are planted it is usual on the part of raisers of seedlings from fine rectified strains of the florist's late Tulips to sow the seed in large pots, deep pans, or boxes well drained, the compost a light and sandy one. There must be good drainage so that water can pass away. The seed should be only thinly covered with soil. As the seeds are as hardy as the bulbs, the pots or boxes in which they are sown may be placed in the open, but it is safer to winter them in a cold frame. Very little growth will appear the first year, only a thin thread resembling that of the Onion. In the second year one narrow blade-like leaf will appear, and in the third year a rather broader one, and this will go on for five or six years until a second leaf is produced, and then a flower may be expected. It is usual to allow seedling Tulips to remain in the pots in which the seeds are sown two or three years, and then when they have ripened their leaves to lift them and replant. There is a singular peculiarity about seedling Tulips which is not generally known. In the second year, and for two or three years after, the seedling plants do not content themselves with forming one bulb only, but two or three or more perhaps, and these are technically termed "droppers." They are to

be found not where the parent bulblet was planted, but at the end of a kind of underground pipe, or hollow stem, which the bulblet sends down below its level in the soil, and all that the raiser of seedlings can do at this stage is to select the longest of these "droppers," which is usually found deepest down in the soil, and grow it on until it ceases to send down "droppers" and has formed a blooming bulb. One only of the "droppers" should be selected; it is enough to prove whether the flower is of value when it opens. "W. M." gives no information as to the section of Tulips from which he has saved seeds. It is to be hoped the seeds are from a strain worthy of the expenditure on his part of time and attention.—R. D.

**Grub on Pear foliage.**—Would you kindly tell me what the grub I send is and its origin? I picked it from a Pear tree.—CONSTANT READER.

\* \* The grubs on your Pear trees are those of the Pear sawfly (*Selandria cerasi*). They will not do much harm at this season. They make their chrysalides in the earth. Spreading quicklime under the trees would kill any that happened to fall on it. If the attack has been a bad one, it would be worth while to remove about 2 inches of the soil under the trees and burn or deeply bury it.—G. S. S.

**Grubs in Cyclamen.**—I send you herewith some Cyclamen bulbs, and also some grubs which eat the roots of the same. You will greatly oblige me by throwing any light upon how they can be eradicated and where the grubs originated.—A. HUBBARD.

\* \* The Cyclamen roots you sent were attacked by the grubs of the black Vine weevil (*Otiorrhynchus sulcatus*) or its near relative the clay-coloured weevil (*O. pecifus*). The parent beetles feed on the foliage of various plants, vines, wall fruit trees, &c. They lay their eggs at the roots of Primulas, Cyclamens, Ferns, Strawberries, and other soft-wooded plants, on which the grubs feed. When present in large numbers, as they frequently are, they injure the plants very much. From their position at the roots insecticides are useless. The only way is to pick out the grubs from among the roots. The weevils only feed at night, and to catch them the best way is to spread a sheet under the plants attacked during the day, and after dark to enter the house with a bright light. This will startle the beetles and they will often fall; if they do not, give the plants a good jarring shake and search them well. Tie small bundles of hay or moss round the stems; the weevils will creep into them for shelter during the day, and can be caught in them.—G. S. S.

**The weather in West Herts.**—Since the present month began there has not been a single warm day with only two warm nights. Indeed, the past week was the first cold one since the middle of June. On the night preceding the 4th the exposed thermometer fell to within 3° of the freezing point. At both 1 foot and 2 feet deep the soil is at the present time about a degree colder than is seasonable. Rain has fallen nearly every day, and to the total depth of over an inch. Until the 6th the wind remained high and came entirely from some westerly point, but since then the weather has been much calmer, and on the 7th the average rate of movement was less than a mile an hour.—E. M., *Berkhamsted*, Sept. 9.

— Since the beginning of the month there has been only one day which was unseasonably warm, with but three warm nights. During this cold spell the exposed thermometer fell to within 4° of the freezing point on five nights. The temperature of the ground, both at 1 foot and 2 feet deep, is now about seasonable, but a few days ago the reading at the former depth was 3° below the September average. No rain at all has fallen since the 8th. Throughout the last eight days the weather has been very calm, the average rate of movement of the air at 30 feet above the ground being on an average less than two miles an hour—

direction mostly some point between north and east. On three consecutive days during the week the sun shone from seven to ten hours a day.—E. M., *Berkhamsted*.

## PUBLIC GARDENS.

### MUNICIPAL VANDALISM.

LORD LONDESBOROUGH sends the following note to the *Times*, and it reminds one of the good things that are destroyed in so-called improvements in towns now and then. For instance, the fine view of the Thames at Richmond is much marred by a kerbstone edge to the river. There may have been some need for a fixed margin to the river, but surely it was possible to have done it without making it like the edge of a London kerbstone! The absence of the sense of beauty in people responsible for the improvements of our towns is deplorable, and it surely should be possible in all large towns and cities to have a committee of men of artistic training or tastes to advise as to such changes.

I venture to ask permission to call public attention through your columns to the vandalism that is being committed on the Castle Hill at Scarborough. Some time ago, much against the wish of a large number of the inhabitants, it was decided to make a road round the base of the Castle Hill. These works have now been commenced, with the result that the north side is irretrievably ruined. Instead of the grand rugged rock to which one is accustomed, there is now what appears a monstrous railway embankment. The road will probably cost over £100,000, but the ratepayers are not, I believe, to be allowed to drive along it free, but are to pay a toll. Who but lunatics would pay for the privilege of driving by the side of a railway embankment?

**St. Paul's Churchyard.**—The most deplorable sight in the City for the past five or six weeks has been the once beautiful garden in St. Paul's Churchyard. No one, we suppose, could have prevented the destruction of the grass while the immense Jubilee stands were being put up, but it has been a matter of considerable surprise that no steps have been taken to lay fresh turf.

**New recreation ground for Richmond.**—We hear that the negotiations between the Town Council and the Crown authorities for the purchase of a large portion of the famous Old Deer Park as a public recreation ground are almost completed, and the hope is expressed that the "new lung for Greater London" will be ready for public opening on the 10th October. The Town Council will acquire nearly ninety acres of the park, and a deputation from the Council will this week wait upon the Chief Commissioner of Works in order to settle the final agreement. The new ground will meet a long-felt want of the local cricket and football clubs, in addition to affording one of the most picturesque open spaces on the banks of the Thames. During the week a meeting of the representatives of the local athletic clubs will be held for the purpose of forming a ground committee to assist the Town Council in regulating the park, and it is hoped it will be possible to secure a member of the Royal Family to perform the opening ceremony.

**Planting Carnations.**—Can any reader inform me whether it is better to plant Carnations from layers during September, or put them into pots and plant in the spring?—T. S.

**Juniperus compressa, creeping form of.**—I sent you lately a note on a supposed creeping form of *Juniperus compressa*. I now write to say this is a mistake. By some means a slip of *J. tamariscifolia* must have been sent me with a number of slips of *J. compressa*. It seems extraordinary that such a strong-growing shrub as

*J. tamariscifolia* should have remained almost without growth for nearly five years. During the last few weeks of heavy rainfall it has shown its true character.—E. C. BRXTON.

**The Ginger plant.**—"Winchester" asks what should be done to make a fine plant of the scarlet variety of the Ginger flower, which has been kept in a vinery in summer and in the Cucumber house in winter. The true Ginger plant is *Zingiber officinale*, which has a fleshy, knotted root-stock, leafy stems about a yard high, the leaves 8 inches to 12 inches long, narrow, spear-shaped, green and rigid. These leafy stems never produce flowers, the flower-stem, which springs direct from the root-stock, being leafless, from 6 inches to 12 inches long, clothed with sheathing bracts and bearing at the apex a small cone-like head, formed of imbricating green bracts, from which the comparatively small unattractive flowers are pushed out two or three at a time. They are greenish-yellow, with a purple spotted labellum. This plant is widely cultivated in tropical Asia and is the source of commercial ginger. Singularly enough, it very rarely flowers even in the tropics. It has only been known to flower once at Kew within the last twenty years. Of course, it is easily cultivated if kept in a warm greenhouse. If "Winchester" will kindly forward to Kew a specimen of his "scarlet variety," it may possibly be identified. Probably it is not the true Ginger plant, but some other species of *Zingiber*, of which some thirty are known. *Z. rubens* has bright red bracts and flowers, but is not known to be in cultivation. There are several species cultivated at Kew, but none of them is of any value for decoration.—W. W.

## OBITUARY.

### MR. JAMES COCKER.

THE news will be received with general regret of the death on Wednesday morning, September 15 at Sunnypark, Aberdeen, of Mr. James Cocker senior partner of the firm of James Cocker and Sons, nurserymen, seedsmen, and florists, Aberdeen. He had been ailing for the past two years and latterly had been unable to attend to business. Deceased was borne at Corse, parish of Forgue, in 1832. He entered the business of his father—who was founder of the firm—at the nursery at Sunnypark, and afterwards went as a journeyman to Cloncaird Castle, Ayrshire. He also spent several years in London studying the various branches of the nursery business. He went into partnership with his father and brother about twenty-six years ago, a partnership which continued until the death of his father sixteen years ago. He then started business on his own account, taking his three sons—James, William and Alexander—into partnership with him. His eldest son James predeceased him three years ago but William and Alexander are still actively engaged in the business. Mr. Cocker was a very enthusiastic and successful cultivator of Dahlias, Pansies, Pinks, and Carnations, while latterly herbaceous plants and Roses claimed his chief attention.

**Royal Horticultural Society.**—On September 21 the next meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Victoria Street, Westminster, from 1 to 5 p.m. Lecture at 3 o'clock by Mr. W. Iggulder on "Cultivation of Cyclamen."

**Names of plants.**—*Constant Reader.*—Please send better specimens, and not single leaves, as in some cases.—*Col. ... and Gabriel.*—1, *Clerodendron fatiolum*; 2, *Vitis acouitifolia*; 3, *Berberis stenocephala*.—*A. B.*—*Mitonia Moreliana*, a good form.—*T. Scott.*—1, too shrivelled to identify; 2, next week; 3, *Polygonum Brunonis*.

**Names of fruit.**—*R. W. M.*—Pears: 1, *Jery Gratioli*; 2, *Beurré d'Arenberg*; Apples: 3, *Lord Suffield*; 4, not recognised; 5, *Waltham Abbey Seedling*; 6, *Warner's King*.—*N. B.*—*Pear Durondeau.*

# THE GARDEN.

[SEPTEMBER 25, 1897.]

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## CHRYSANTHEMUMS.

### EARLY-FLOWERING CHRYSANTHEMUMS.

More than ordinary interest was felt in the display of Chrysanthemums at the September show of the National Chrysanthemum Society this year; at least, so far as the somewhat limited number of admirers of the early sorts are concerned. This season a step in the right direction was taken by the committee, who had appealed to the best known cultivators of the early flowering varieties for an expression of opinion as to the sorts which should be classified as "early flowering," and with which to make a special section in the Jubilee edition of their catalogue. As a result of this appeal the have been divided into two sets—(a) Japanese and (b) Pompons. The selections comprise thirty kinds of each type of the flower, and represent pretty well the best sorts now grown. The exhibition, held on September 7 and two following days, was confined to the varieties enumerated in the Jubilee catalogue, and considering the lateness of several of the best sorts, the committee have every reason to be satisfied with their first effort in this direction. With two exceptions, all the pompon varieties flower naturally during the latter part of August and the whole of September, and on this account there was plenty of material to select from. On the other hand, of the Japanese sorts included in the list, half of them were in bloom during September—several of these late in the month, and the second half during October. It will therefore be seen that the list is supplemented with novelties at present little known, the Japanese sorts will be represented in as interesting a variety of color and form as the admirers of the flower would wish. Such varieties of recent introduction as Barbara Forbes, Queen of the Earlies, and pure white, the former distinctly the

better of the two; Mme. Casimir Perier, white prettily tinted pink; Ambroise Thomas, crimson-red, tipped bright gold; Francois Vuillermet, pale rosy blush, very free and branching; Gladys Roult, a pretty little white flower for October; Mons. Levéque Père, a large bright bronze flower; Notaire Groz, a lovely lilac-mauve, very free, really an early James Salter; Rose Queen, beautiful shade of rose, free and dwarf; Ivy Stark, nearest approach to an early Source d'Or, though smaller, very dwarf; Mme. Armand Groz, pale primrose-yellow, flushed blush-pink, very pretty indeed, and exceedingly free; M. Regnault de Molmain, creamy-white shaded rose with a darker centre; and De la Guille, rich orange, passing to yellow, dwarf and bushy, may be considered desirable additions to the early blooming section, their period of flowering extending over a term of fully six weeks, commencing early in September and continuing well into October.

The early-flowering Chrysanthemum is essentially a hardy border plant, and is never seen to greater advantage than when freely used in large beds and borders, where it makes a bold and handsome display. In such positions little or no disbudding is necessary, and then useful sprays of handsome blossoms, although small or of medium size, may be had for quite a long time. Far better results may be achieved by planting out as suggested, as with very little attention a wealth of blossoms may be had when the majority of the late summer and early autumn flowers are past their best or have been crippled by a few degrees of frost.

Growers of high-class blooms are sometimes disposed to underrate the value of the early kinds, considering them unworthy of attention, because of the small size of their flowers, but to those who have to keep up a continuous supply of bloom these pretty little blossoms, if cut in sprays, are invaluable. It is a pity, therefore, that a really good exhibition of these sorts cannot be made. The first week in September is quite a fortnight too early, and although this is better than no display at all, there is no deny-

ing the fact that gardens would be far richer if facilities were given to bring the real merits of the early-flowering Chrysanthemums into prominence. D. B. CRANE.

### EARLY-FLOWERING CHRYSANTHEMUMS AT THE AQUARIUM.

THE display of these was as usual somewhat scanty. Whites, of course, are valuable at any time for the supply of cut bloom, because of the lasting quality of Chrysanthemums. These, however, must have the protection of glass to open them pure in colour and clean in petal. Kinds with bright tints are conspicuously rare; the lilacs seem dingy, the reds washed out. Mme. De-grange and the yellow sports G. Wermig and Mrs. Hawkins are especially beautiful. These lend themselves to the production of blooms of a good size. Those named were well shown at the Aquarium. A board composed of six bunches of the yellow sorts cut with long stems had a rich effect. Queen of the Earlies, exhibited in medium sized blossoms, appeared most chaste. This was probably opened under glass. Barbara Forbes is another white with a faint primrose tinge, well worth cultivating. Emily Silsbury, yet another white, may be had good in September, but must be opened under glass. Lady Fitzwygram is perhaps the purest white of sorts that will flower in the open border, and is a most useful kind as a pot plant. The habit is dwarf and bushy, the blooms shapely. Mme. Marie Masse (rose-pink) was seen bright in colour; so, too, was Harvest Home (red and gold). Ambroise Thomas (bronzy-tinted red) seems a pretty sort, of recent introduction.

Two sports from the variety M. G. Grunerwald were exhibited, the one a bronze, the other a yellow. They were not, however, in a condition good enough to judge of their merits. It was pleasing to note that the National Chrysanthemum Society awarded the prizes to really early kinds. More than one exhibit was disqualified because it contained naturally late kinds made to open their blossoms early by manipulating the flower-buds. Nothing could be more misleading to those who expected early flowers from such sorts in the ordinary way. W. H. Lincoln, for instance, is a

variety that may be forced into flower in August as well as be retarded up to January. H. S.

#### SHORT NOTES.—CHRYSANTHEMUMS.

**Buds on Chrysanthemums** (*Penlwyn*).—By the term "taking a bud on the third run" is meant retaining the third bud appearing on the shoot after the break is made. This latter break may have either been made naturally by the formation of the bud causing the new growths to break away from around it, or it may have been caused by pinching out the points of the shoots to effect the same purpose. A bud on the third run may be either a second or third crown bud, and it may also be a terminal bud. Varieties differ so much in this particular that no general rule can be laid down.

**Chrysanthemum Calvat's Australian Gold.**—I have noticed something wrong with this variety in several places this season. The tender tips of the growth appear as if scorched by the sun just as they are forming flower-buds. So much so has this been the case in one instance that the embryo blooms are quite destroyed. When first seen it looked like a case of over-feeding, but when noted in other gardens there seems something characteristic of the variety. Although this sort was not exhibited in good form last year, I fancy it will be this, and I still think it a magnificent Chrysanthemum—one that is easily grown.—H.

## KITCHEN GARDEN.

### RUNNER BEANS.

WHEN I compare the thick, old, hard, and too often dirty and stale Runner Beans Londoners have to purchase from greengrocers with the beautiful clean, fresh, tender Beans seen in such abundance in good gardens, I wonder naturally whether town consumers do ever partake of these Beans in a condition fit for food. That our market sample is, as a rule, the very worst of any form of vegetable put on to the market there can be no doubt. Very few market growers stake their Beans, and even if they do, only for very limited heights. Most of these Beans are dwarfed by pinching close to the ground, where the pods become crooked, hard, and dirty very quickly; and because the plants have no supports on which to climb the crop is far from being a continuous one. Then little or no care is exercised in the gathering. This is usually done by women who are paid per bushel, and who pull off young and old indiscriminately, clearing so many rows at one time and so many at another. Thus there is no sorting, and the market gardener makes no complaint. It is under such conditions as these town consumers have to take their Beans or leave them. No wonder if when sliced up, as they needs must be to get them edible when boiled, they show as much of flavour as boiled sticks, some being soft, some hard. Whenever I see, as I have of late, many grand rows of Runner Beans, especially of the newer selections, having tall stakes to support them, and in consequence running up to a height of from 10 feet to 12 feet, dense in growth, though the seeds were thinly sown, and full of handsome straight tender pods from top to bottom, I mentally ask whether growing runners on this method for market could not be made to pay. I believe it could, for the produce obtained from such rows as I have described is really marvellous, extending continuously for nearly three months. I have been into many good gardens lately, and in all have noticed the splendid Runner Bean crops. At Forde Abbey

Mr. Crook has splendid rows of the Best of All or Prize-winner type, fine selections from Ne Plus Ultra, and Mr. Bowerman has much longer ones of the same stock at Hackwood, carrying the longest and handsomest Beans I have seen, deliciously tender and crisp, really surprising crops. These are the product of the finest stocks, of thin sowing, 9 inches to 12 inches apart, deeply worked soil, well manured and tall well-secured supports. Would it not pay anyone engaged in market gardening to prepare say an acre of ground by deep trenching and heavy manuring, to get seed of the finest stocks, sow thinly in rows, not less than 6 feet apart, and furnish to the plants tall supports well secured against wind storms? The higher the Beans can run the longer will they bear pods. A liberal mulching of long manure should be laid between the rows, and a copious supply of water or sewage furnished in hot weather if needed. A. D.

**Crimson Globe Onion.**—This very handsome variety is so great an advance on the old Blood Red that those who have a strong preference for colour in Onions will highly appreciate it. This Onion, whilst always showing high flavour, is also a good keeper. Even when the plants are raised under glass and later dibbled out thinly into rich soil, the bulbs do not come to an inordinate size, but they are very richly coloured, solid and distinct. In shape, though termed Globe, it is rather round than spherical; indeed, gives very perfect deep form.—A. D.

**Potato Early Regent.**—I was glad to see such a favourable notice of this Potato by "A. D." in THE GARDEN (p. 175). I have grown it for several years as a second early, and can corroborate all your correspondent says about it. I have counted upwards of thirty usable tubers from a single root, and the quality was all that could be desired. Potatoes on different soils vary in cooking qualities to such an extent that it is not possible to satisfactorily recommend any one variety, but by growing a few sorts for trial, one will soon hit upon the variety suitable to his soil, and by changing the seed occasionally there need be no fear of any deterioration in productiveness or quality.—J. EASTER, *Nostell Priory Gardens*.

**Potato Up to Date.**—I lifted a few days since the whole of the rows of twenty-six diverse varieties of Potatoes grown by me for trial on an allotment plot at Surbiton. Up to Date from seed tubers kindly given me for the purpose by Mr. Sydenham, of Birmingham, gave much the heaviest crop, one that so attracted the attention of the allotment holders that there was much anxiety shown to secure stock. Next in cropping order came Syon House Prolific—seed being kindly given by Mr. Wythes—Chancellor, Prime Minister, Satisfaction, Windsor Castle, The Bruce and Renown. The tubers of Up to Date have something of the old Lapstone form and are of good general table size. So far it is the heaviest cropper I have seen this season.—A. D.

**The Bean beetle or weevil.**—Those who are engaged in the seed trade are familiar with dry seeds of Broad Beans, both Long-pod and Windsor, riddled by the Bean beetle. Sometimes a crop of English-grown Beans is much injured by it, and it is often found that seeds of imported Beans are badly affected. When Mr. Messrs. Hurst and Sons' seed grounds at Kelvedon a short time since, my attention was called to two rows of Seville Long-pod Beans, taken from a sample of imported seed returned from a customer, on the ground that they would not grow, being so much punctured by the beetle. Enough Beans were picked out from the bulk to sow two somewhat long lines: one lot consisted of the worst samples—those which appeared to be riddled through and through; and one of Beans only slightly so. Not a seed appears to have failed, and, though the rows were side by side, the worst Beans had actually produced the strongest plants.

This might have been simply a coincidence, there was no mistaking the fact. The lesson drawn from the experiment is that the operation of the beetle do not destroy the vital germ in Beans, and that to suppose their vitality is paired is a misconception.—R. D.

### MAGGOTS IN MUSHROOMS.

My Mushrooms grown in beds under cover in usual way—without being heated—are being infested with maggots. I have frequently found them in large ones, so I thought I would try smaller ones, and they are equally as bad. Can any dressing be used to prevent the disease without injuring the crop?—J. H.

\*\* Beds so affected are useless, and not worth any further trouble. It is strange that we grow the Mushroom to perfection from October to May, possibly June, in an ordinary Mushroom house heated or otherwise, with in the same structure during the summer, with as much care as possible and grown up, it is almost impossible to get clean Mushrooms. The maggot asserts itself, and once in evidence the crop is useless. "J. H." says beds are under cover. This is the evil; they are deficient in atmospheric moisture. No matter how much damped down and syringed, if the house above the ground level it is fatal. There have been cases of successful culture in such houses during cold, wet summers; but in a dry season with great heat like this year, Mushroom culture in the ordinary Mushroom house is out of the question. Very good crops are obtained in cellars where a regular temperature is maintained. You do not tell us the kind of house where your beds are, but I conclude it is an ordinary built with the roof exposed. This is the evil, as it is impossible to prevent dry air entering the house. I have for years discontinued the culture of Mushrooms in the ordinary Mushroom house from October to October. There will be no difficulty now if the atmosphere is charged with moisture. Next year you may succeed by having a ridge-shaped bed to the open under a north wall. A bed made thus in May will give you a good supply free of maggots, but even then you will need to use plenty of litter over the surface to keep the bed cool and moist. If you have a cool cellar, an old, deep, dis-stoke-hole, or any place where air and dirt cannot enter freely, you could make beds there and you would not be troubled with the pest. I cannot give you a remedy to prevent the maggot without injuring your crop; it is best to prevent the evil by adopting the advice given above. Drawings of any kind are out of the question—in fact, useless.—G. W.

**Ketchup-making.**—It is to me astonishing that many people are not poisoned by eating ketchup purchased from common hawkers in country towns. Perhaps the reason why the majority escape is because so little of it is taken of at each meal. In this neighbourhood men and women scour the country, and nothing in the shape of a Mushroom escapes them. I go home laden with a mixed lot. I recently saw an unscrupulous gatherer enter a meadow near my residence, top up his basket with common Toadstools, and go on his way. No doubt many who buy bottles of ketchup at the door are totally ignorant of its constituent parts, and think they ought to be warned against these unscrupulous vendors.—J. CRAWFORD, *Notts*.

**Late Vegetable Marrows.**—In many gardens where these are appreciated, as long a supply as possible is aimed at; a batch of plants being brought on for producing Marrows during the last half of August, September, and October. These being specially valuable, it behoves them to be in charge to afford some temporary means of shelter from early frosts, as few things are more susceptible to injury from such as Marrows. When the pits are plentiful and one can be spared for the late batch, it is a good plan to give the plants the benefit of it. If fairly wide it will generally cool

the growth made by these late plants, and the light can be drawn over them in case of cold nights. Filling pits, a rough framework of rails can be easily formed, this being covered as with the cooler nights necessitate it with mats of canvas. Any short-jointed, small fruiting varieties are better for growing for late supplies than more rampant large fruiting varieties, and a more free soil is best.—J. C.

**late market Peas.**—Many will agree with "Power's" note at page 136 on the short season market is provided with Peas. A large grower told me the demand after the London season is was insufficient to warrant having large quantities of late Peas. Possibly the growers have not paid sufficient attention to variety. I saw some of the kinds sold in June and July not worth cooking, and they get old so quickly. "Power" names a few good kinds. I could add several more to his list, and these are Marrows of first-rate quality. On the other hand, the seed is not cheap, and in quantity would be costly, and anyone could soon get over the difficulty by ordering for seed a year in advance. There has been great improvement in Peas of late years, especially in the dwarf section. I noticed this season a grower who had a few late rows for sale was overwhelmed with orders. I think there would be a demand. In the north there would be a difficulty in getting a late supply.—B. M.

**Asparagus at Gunton.**—Mr. Allan always raises his own plants, and now never plants berry-bearing ones, having proved from continued observation that the non-berry bearers produce not on finer grass, but much more of it. Mr. Allan told me to see his beds and pointed this out to me. All through the large beds I did not see a single exception to the rule. Plants raised from seed one summer produce seed the next if seed-bearers, and when the berries appear the plants are gone over and marked, so that the right ones are taken up for planting in spring, the others being discarded. Careful lifting, keeping the young, tender, fibrous rootlets moist while out of the ground, planting in shallow trenches, mulching, staking when sufficiently high, and watering several times in dry summers are the chief cultural details by which Mr. Allan lays the first season the foundation from which springs grass the second summer 5 feet and 6 feet high and as thick as walking-sticks.—J. C.

**Savoys New Year.**—Last year this new Savoy did well that I planted it again, and, from the appearance of the plants, I think it will be one of the best introductions of late years. As most growers are aware, Savoys early in the year are of greater value than in the autumn, as the flavour is superior, and the new one named above is mild in flavour that it is worth special cultivation. It is smaller than the Drumhead, and I suppose this latter point will not make it a market variety where size is the chief consideration. On the other hand, it will commend itself to private growers. Its value is greater on account of its lateness. With me it does not split in wet seasons like the older Drumhead. The plants are very close and of a deep green colour. There are few outside coarse leaves, therefore little waste. From its compact growth I should say it is one of the hardiest Savoys grown. I planted on an east border to get late supplies, and noted how well this variety stood the wet last season. It appears to be a cross between Late Drumhead and De Vertus, a late, good kind much grown on the Continent.—G. WYTHES.

**late Leeks.**—Few vegetables of late years have come into such favour as the Leek. In my earlier days I was in gardens where the Leek was not tolerated, but why I do not know, as it is one of our best late spring vegetables, and nicely cooked few can object to its flavour. Doubtless in severe winters we have had now and again in a measure shown us the value of the Leek. The winters ago it was one of the few things left in our gardens, and green vegetables were highly prized. Another point in its favour is its lateness. The Leek is the last vegetable to

run to seed in the spring, and if lifted and heeled in in a cool north border under a wall, it will be good well into May if the soil is kept moist and shaded. Having to supply vegetables in great quantities in the spring, I have planted Leeks largely. I do not attempt to grow the plants after the manner of exhibition roots, but in deep drills 2 feet apart. In the early part of the year, in suitable weather soil is drawn up to the stems to assist in blanching. For late supplies none can equal the Musselburgh. It is not so thick as earlier kinds, but the quality is good and it is one of the hardiest and latest.—S. H. M.

**FRUIT AND VEGETABLE CROPS.**

**WESTERN.**

**Sundorne Castle, Shrewsbury.**—Apples are a moderate crop, Keswick Codlin, Stirling Castle, Lane's Prince Albert, Cellini, Warner's King, and Ribston Pippin being the best. Of Pears there is an average crop, both on walls and bush trained trees. Beurré Diel, Winter Nelis, Glou Moreceau, Jargonelle, Beurré Rance, and Pitmaston Duchess are best on the wall. Damsons and Plums in this neighbourhood are quite a failure. Peaches and Nectarines outside are a splendid crop in this garden. Strawberries have been very good, but the season very short. Gooseberries and Currants have been good; also Cherries and Nuts.—G. PHILLIPS.

**Toddington, Winchcombe, Glos.**—The fruit crops in this district are much below the average with the exception of Strawberries, which were about an average. Plums are a very poor crop, and the same may be said of Apples, though in places fair crops may be seen. Against walls Peaches and Nectarines are fair crops, though the trees were badly affected with blister. Pears rather under average; Cherries much under. Of bush fruits, Red Currants were the best, Black Currants and Raspberries being much under. Aphid has been less in evidence than is usual, but a good many Plum trees in the neighbourhood have been attacked by the shot bore beetle (*Xyleborus dispar*), and are dead in consequence.—J. CLEAKE.

**Bowood Park, Calne, Wilts.**—Fruit crops are much below the average, Apples and Pears in particular, while Plums are a complete failure. Apricots are a fair crop, likewise Peaches and Nectarines, and there has been a fairly good crop of Strawberries and small fruits.

Vegetables on the whole are good. Potatoes up to recently were looking well, but I regret to say the disease has made its appearance all through this district.—GEORGE BROWN.

**Tregothnan, Cornwall.**—Apples are under average; Pears and Plums very scarce; Peaches only half a crop, as the trees blistered badly and the fruit dropped. Cherries (Morello) are almost a failure; Strawberries better than for several seasons and the fruit good, but the crop was soon over. All bush fruit is good.

Vegetables, considering the dry season, are very fair. Early Potatoes and early Peas good; mid-season varieties were badly infested with mildew. Early Cauliflowers were bad, many of the plants buttoning. Both autumn and spring-sown Onions and Shallots are good.—WM. ANDREWS.

**Forde Abbey, Chard.**—In early spring there was a promise of an abundant fruit crop. Pears set a heavy crop and swelled up to a good size. On some bush trees the fruit attained to a good size. About the time the Apples were on the point of setting we had a severe frost, which destroyed the greater part of the bloom and froze the Pears right through. This happened in some instances where they had double fish-netting over them. Plums are almost a failure; Magnum Bonum and Orleans on a north wall are the best; Jefferson's and Kirke's have a few. Morello Cherries are a splendid crop, and very fine from north walls. Our best cropping Apples are Lord Suffield, Domino, Royal Somerset, Lane's, Cox's,

and Mannington Pearmain. Of Pears, Winter Nelis, Durondeau, Beurré de Capiaumont, Old Cras-sane, Passe Colmar, and Grosse Calchasse are the best. Strawberries not half a crop, bloom killed by frost, Royal Sovereign and President the best. Gooseberries an enormous crop. Black Currants grand. Red poor.—J. CROOK.

**Haverholme Priory, Sleaford.**—Apples are a good average crop, especially Lord Suffield, Lord Grosvenor, Potts' Seedling, New Hawthornden, Beauty of Kent, Warner's King, Ecklinville Pippin, Keswick Codlin, Stirling Castle and Northern Greening; fruit fine and clean. Pears are very uneven; still we have nice crops of Louise Bonne of Jersey, Jargonelle, Beurré Bosc, Marie Louise, Brown Beurré, Marie Louise d'Uccle, Haeon's Incomparable, Glou Moreceau, Beurré Diel and British Queen. Plums, Cherries and Apricots are very poor; in fact, the worst crop for ten years. Strawberries were a good average crop, rather small, but flavour excellent. Gooseberries very good and plentiful. Currants (Red and Black) under average.

Vegetables good and plentiful. We have a good heavy subsoil, so the drought does not affect us.—J. COWARD.

**Stourton Court, Stourbridge.**—Stone fruit here is quite a failure, with the exception of Victoria Plums, which have a grand crop. Apples are a fair crop, especially Warner's King, Emperor Alexander, Lord Suffield, and Keswick Codlin. Beurré Diel, Jargonelle, Williams' Bon Chrétien, and Marie Louise Pears on an old wall facing south have splendid crops. Red Currants and Raspberries were above the average. Black Currants were not so good, with the exception of Carter's Champion, which bore well.—T. SIMPSON.

**Cirencester House.**—Apples are abundant, but injured by a terrific hailstorm, which occurred on July 20. Pears a fair crop; the fruit is clean and the trees healthy, also free from insects. Plums a failure. Apricots heavy crop and good. Peaches very good. Cherries half a crop. Strawberries excellent in every way. Bush fruit also excellent and abundant.

Vegetables good. Although I have not found any disease in Potatoes, I hear complaints and I notice the haulm of some varieties is attacked.—T. ARNOLD.

**MIDLAND.**

**Bostock Hall, Middlewich, Cheshire.**—In this district a few varieties of Apples are carrying good crops, including such sorts as Lord Suffield, Keswick Codlin, Manks Codlin, Ribston Pippin, Yorkshire Greening, Beauty of Kent, and Pott's Seedling. Other varieties are thin. Pears are generally very poor. We have a few nice Jargonelle, Aston Town, and Swan's Egg. Morello Cherries are very fine and plentiful; other sorts very scarce; Damsons, Plums, and Apricots are quite a failure; Strawberries and Raspberries good crops; Black Currants poor; Red Currants very good; Gooseberries plentiful.

In spite of the dry season, vegetables are very good. Peas, Scarlet Runners, French Beans, Celery, Cauliflowers, Onions, and Carrots are excellent crops; Potatoes also capital crops and of good flavour.—A. STATHAN.

**Coddington Hall, Newark.**—The fruit crops in our garden and this district generally are the poorest known for many years. The spring brought great promises in the way of abundance of bloom, but the bitter, almost unprecedented cold winds of April and May—not frost—shattered all hopes. Gooseberries, Black Currants and Raspberries were only half a crop; Red Currants average, La Versailles exceeding all othersorts. Were I planting for market purposes this is the variety I should choose. Superlative Raspberry seems to stand a cold spring better than the older varieties, and should be planted in exposed gardens. Strawberries were a light crop, many of the plants in rows of old well-tried sorts not showing a single truss of bloom. Of Apples we have but a poor crop. In young orchards where the wind had free access none but a few hardy

sorts, such as Duchess of Oldenburg, King of Pippins and Sturmer Pippin, have any fruit on. Old trees that are a complete thicket of wood are carrying half a crop. This is, I think, instructive, as proving the folly in our uncertain seasons of thinning out young Apple trees too much. On espaliers, Fearn's Pippin, a never-failing Apple here, has a capital crop, also Cox's Pomona and Stirling Castle. Other sorts are a failure. Pears, both on walls and espaliers, are half a crop, Pitmaston Duchess, Doyenné du Comice, Louise Bonne, Glou Morceau and Beurré d'Arenberg bearing the heaviest crops. Plums and Damsons are next to a failure, even the old Victoria in market gardens failing to yield. Peaches on open walls are the choicest I have had for years, Dymond, a splendid hardy outdoor Peach, of excellent quality, carrying the most fruit. Morello Cherry trees, which had borne well for the past ten years, have not a single fruit on them. Nuts are plentiful.

Vegetables have done well, except Peas, which were hurried on by the extreme heat and lack of moisture. Potatoes have yielded good crops, Ringleader, Snowdrop, Carter's Snowball being excellent under garden culture; late sorts in field promise a good return. I still keep to the Magnum Bonum as a main winter Potato, as it does well on the light soil. I change the stock of seed every few years.—J. CRAWFORD.

**Thoresby.**—The fruit crops are very erratic. Early in spring there was a promise of a plentiful crop of everything. Cold east winds, however, set in and continued all through the flowering and setting time. These caused most of the flowers to drop, and now Apples are but a light crop, also Pears, Plums, and Morello Cherries. Sweet Cherries are half a crop. Small fruits are good, except Black Currants.

Vegetables were late owing to such a spring, and since the end of June we had little rain, and required to water all the crops in the kitchen garden.—A. HENDERSON.

**Alton Towers, Staffordshire.**—The majority of hardy fruit trees blossomed well, but owing to the continued cold east winds and sharp frosts in May which killed the blossom, and even caused some of the fruit which was set to fall off, there is scarcely an average crop of anything except Apples, which are very heavy in some cases, especially those of the Codlin type. Pears are very thin; a mere sprinkling on some trees, on others none at all. Stone fruits are a total failure. Of Plums there are none. The Cherries set well, but dropped off wholesale at the stoning period. Currants and Gooseberries are fair. Strawberries small and soon over, owing to the dry weather.

Vegetables on the whole are fairly good here, but light crops are the rule in most cases in this district. Root crops are small and below the average standard, scarcity of moisture being the prevailing cause.—E. GILMAN.

**Impney, Droitwich.**—The fruit prospects here are not so satisfactory as they promised to be at the flowering season, particularly in the case of Apples. The cold east winds and late frosts crippled the bloom. The Apples bearing best with me are Keswick Codlin, Stirling Castle, and Lane's Prince Albert; Worcester Pearmain, Cox's Orange, and Fearn's Pippin are also carrying fair crops. Pears are a good average crop, both on walls and bushes. Plums are a thin crop; Early Orleans, Jefferson's and Kirke's are the best. Peaches outside, Apricots, Cherries, and Damsons are a failure. Gooseberries, Currants, and Raspberries have carried good crops, the fruit of good quality.

Early Potatoes are small; late Potatoes promise to be good. Vegetable crops generally have suffered owing to the long-continued drought.—F. JORDAN.

**Teddesley Park, Penkridge, Staffs.**—In this district in the spring there was a great wealth of bloom on all hardy fruit trees, but the continual cold from the north-east, coupled with late frosts in May and June, seriously damaged the prospect of good crops. Apples were very much below the

average, although some trees are carrying good crops, while others are a failure. Pears set well, but have dropped badly, leaving very few on some trees, while others have a fair crop. Peaches and Nectarines are a failure. The trees were badly blistered in the spring, but are now making good growth. Apricots are poor. Plums are a medium crop, Victoria and Jefferson's being the best. Morello Cherries are very good and fruit fine in quality. The Strawberry crop was a heavy one and the fruit large, the finest being President. Raspberries are good and of fair quality. Gooseberries a heavy crop; Red Currants medium; Black the worst we have had for the past nine years; Damsons very poor; Walnuts bad.

Vegetables have been very good this season, with the exception of Cauliflowers, a great many having gone blind. Peas have been very good. Chelsea Gem, William Hurst, and English Wonder grown on south borders for the earliest supply have been very good. The last-named I consider a grand dwarf Pea. Midseason Peas were soon over, owing to the spell of hot weather we had. Autocrat is a good dry-weather Pea. Ne Plus Ultra and Sturdy grown for a late supply are coming in earlier than usual this season. Runner Beans and the climbing French Bean are giving good results. Winter greens of every description are looking remarkably well, so are root crops. Early Potatoes have turned out very good. Late Potatoes are looking well and promise to be heavy crops. At present there are no signs of disease.—F. CLARKE.

**Chatsworth.**—The fruit crops in this district are under the average with the exception of Strawberries, which have been over the average and of good quality. Apples, Pears, and Plums are a poor crop. Cherries average crop. Bush fruits moderate.

Vegetables of all kinds are growing freely. Potatoes are a good crop and free from disease.—W. CHESTER.

**Aldenham Park, Bridgnorth.**—Apples, Plums, Peaches, and Apricots in these gardens and immediate district are much below the average, and Damsons, I might say, are a complete failure, though it is very seldom these fail here; you will find them growing in almost every hedgerow, and they seem to thrive better in this position than when planted in either garden or orchard. Cherries of every description are much below the average. Gooseberries, Currants, and Strawberries were very plentiful.

Vegetables are very good in general, and from what I have seen at local shows the quality is an advance on late years.—THOS. CANNING.

**Hardwicke Grange, near Shrewsbury.**—Fruit crops, on the whole, are below the average, Apples particularly so. Nine-tenths of the trees have no fruit. I notice a tree here and there carrying a crop. These are more or less early varieties. The cause of this, I fear, is a good deal owing to the maggot. Not only did it take the blooms and young fruit, but the foliage as well, and this has been going on for some years. Pears are somewhat better, still not good by any means; and what seems strange, with the abundance of fine hot weather, is that much of the fruit is scabbed. Worse still is the crop of Plums and Damsons. In the gardens here we have only a few Green Gages on walls, no others to speak of. No one can remember when fewer Apricots have been gathered in this neighbourhood. Many cottagers will be reminded of this when rent-day comes. Cherries have also been poor. I should be glad to hear if the Morello trees are noticed to be dying off badly the last few years. It is so with me. What can be the cause of it? I can write much more hopefully of the Peach crop. There is enough and to spare. The foliage at first was blistered very badly. I pull all such leaves off, apply the garden engine every evening with warm water, which soon alters matters, and if mildew puts in an appearance, we have now that excellent remedy, X.L.A.L. I gathered a fine lot of Early Alexander outdoors in July. I think, notwithstanding the long spell of hot, dry weather,

Peaches generally are later than usual. I think, may partly be accounted for by the early trees received early in the season by blight &c. Of Figs we have a good crop. Trees looking healthy after being killed to the ground a few years since. Cob Nuts are plentiful, Filberts are scarce and Walnuts but few. Currants are a failure, Black Currants or little better, and Gooseberries few and far between. Raspberries have been somewhat better, only the extra labour of heavy watering. Strawberries have been a good crop, but of short duration.—J. TAYLOR.

#### NORTHERN.

**Lowther, Penrith, Westmoreland.**—Apples are a very poor crop indeed, in many places a failure. Pears average crop. Cherries and Plums below average. No Peaches, Nectarines or Nuts grown outside. Raspberries, Gooseberries, and Red Currants average. Strawberries very good, fruit very fine, particularly James Veitch, Countess, Auguste Nicaise, F. d. Sovereign, and Empress of India. The above are the best varieties I grow, and for travelling I find Countess to be far the best, as it is not only fine fruit, of good flavour and appearance, but has the seed well on the surface, which is a great thing in the saving of the fruit from crushing.—F. CLARK.

**Abney Hall, Cheadle.**—As regards fruit crops, this year is the most unsatisfactory. Apples are the best. They are barely an average crop, though after these late rains they are setting up well, and we shall have some good kitchen Apples. The dessert kinds do not produce satisfactory results in our district, and there are not much grown. Pears are a failure, so are Plums. Cherries have been poor also. As regards bush fruit, Gooseberries were far below average; Black Currants a failure; Red Currants fair; Raspberries moderate.

The Pea crop looks well, having abundant pods. After William I. for early use I grow Plus Ultra mainly, and I find nothing better. Of course it requires long stakes, but it is certainly worth an effort to provide these. The only satisfactory way to do Onions in this part is to raise the young plants in boxes under glass in the spring, and then plant them out so that they have a good early start; then they give a good return. Crops of autumn Cauliflowers, Brussels Sprouts, Celery, &c., are looking well.—R. M'ELLAR.

**Elm Hall Gardens, Liverpool.**—Apples in this district are up to average. Warner's King, Ecklinville, Lord Suffield, Bismarck, Dumek Seedling, Peasgood's Nonsuch, Cox's Orange Pippin, Blenheim Orange, Ribston Pippin, and I believe Peach are carrying heavy crops. Pears are fair. The best are Jargonelle, Louise Bonne of Jersey, Marie Louise, and Clapp's Favourite. Plums, Cherries are very thin; Peaches, Nectarines, Apricots, and Figs excellent. Strawberries have yielded fine crops. Bush fruit has been plentiful with the exception of Black Currants.

Spring and summer vegetables have done well. They are doing remarkably well, while those in the winter quarters are just as promising.—JAMES BRACEGIRDLE.

**Allerton Priory, Liverpool.**—Strawberries have been fair. Bush fruits good on the whole, but Currants thinner than usual. Cherries poor. Plums and Damsons are a failure, the weather having been very unfavourable during the time they were in flower. Pears are moderate, the best being Jargonelle, a full crop, B. d'Amanlis, Durandean, and Thompson's. Apples as standard are the best, and include Warner's King, Lord Derby, Ecklinville Seedling, King of Pippin, Lemon Pippin, Keswick Codlin, and the Duke of Pomeroy, which I consider one of the very best of cooking Apples, although pushed into the background by its more showy rivals. Bush trees carrying good crops are Worcester Pearmain, Ribston Pippin, Lane's Prince Albert, and Potts' Seedling.—J. J. CRAVEN.

THE GRANGE, [ASKRIGG.

THE GRANGE, near Askrigg, Yorkshire, of which we to-day give an illustration, sometimes called by Hall and now used as a farmhouse, is said to have been built on part of the "Abbey of Fors," founded by Peter de Quincey. It is prettily situated near a waterfall on one of the mountain streams in Uredale, the garden, as will be seen from the illustration, occupying the front of the house.

**Heights of perennial Phloxes.**—While it is perfectly correct to say of the old or ordinary sort of hardy Phlox that growths increase in height as the plants become older, it should be evident that such heightening is due not to increased vigour, but to greater density of growth,

FLOWER GARDEN.

TUFTED PANSIES—A LATE DISPLAY.

It is some years since the Tufted Pansies were in such fine condition as they are just now. In the neighbourhood of London, in the middle of September, blossoms of phenomenal size and exceedingly rich colour may now be seen. This is ample compensation for a display of a less interesting character experienced early in the year, when in the first place, chiefly owing to cold and cutting winds, followed by drought, the plants suffered very considerably, and the display was not quite so fine as one would have wished for. The value of a good mulching was never more apparent. Especially during the

were treated to a compost made up of equal parts of sifted loam and rotten manure, with the addition of a sprinkling of guano, and these plants have attained quite large proportions, and are making an exceedingly free display. The quality of the flowers regarding size, colour and substance has been of a high standard of excellence. The plants are now simply bristling with numerous young growths, which will serve to perpetuate the different sorts, and these are easily detached with roots appended, or, to those who prefer the system, of a suitable size to make first-class cuttings.

With the introduction of so many fine novelties during recent years, there has been a constant inquiry for those sorts which commence to flower very early in the season, and those, too,



The Grange, near Askrigg, Yorks. From a photograph by Mr. G. F. Jones, Malton, Yorks.

largely excluding from the leaves and stems heat and air, and causing the growths, in fighting for the possession of these elements, to go higher than of them than would otherwise be the case. It is but a repetition of what is always seen in vegetation when plant growths are crowded. But with reference to the heightening of the growths of the really dwarf varieties, that is of an age but infinitesimal, because habit is as potent a force as tendency. Thus at Chiswick, where a fine collection of Phloxes of several years' standing may be seen, and also as seen at Long Ditton, true dwarfs remain dwarfs relatively to others. There is plenty of varieties, none of the highest excellence, whose regular height ranges from 12 inches to 18 inches.—A. D.

spells of very hot weather was this fact more noticeable: those plants which had been generously treated in this way grew away vigorously and blossomed profusely, although, owing to the great heat, the blossoms shrivelled long before they had attained their full size. The cooler and moister weather of the greater part of August, and also during the first half of the present month, has just suited these plants, and while other subjects in the hardy flower garden are looking anything but happy and comfortable, the Tufted Pansies have simply revelled in it. The rotten manure with which the beds had been mulched has been very valuable to the plants just lately. Some beds

which are seen at their best during the latter part of the season. At the present time the following sorts with me are in the pink of condition: each of the members of the Duchess of Fife family, which includes that already mentioned; Goldfinch and White Duchess; together with the original of this type of plant and form, Ardwell Gem, are as good as I have seen them for a long time. Devonshire Cream, the new creamy white flower; Ethel Hancock, purest white; Nellie, white; and Christiana, the last with a rich orange suffusion on the lower petal, are each literally covered with blossoms. Of the yellow sorts, Pembroke, one of the very best; A. J. Rowberry, Molly Pope,

rich butter yellow; Princess Louise, one of the finest bedding sorts; Mary Gilbert, and Lord Elcho, are a blaze of rich colour, and alongside the white varieties are making a most beautiful contrast. The delicate colouring of pale rosy blush as seen in *Rosea pallida*, one of the freest and best of the tufted sorts, appeals to almost everyone, and this in conjunction with the large oval rayless flowers of *Florizel*, a blush-lilac colour, forms a very welcome feature in the garden. Sir Robert Peel, a new variety distributed for the first time this year, is in excellent form, with its large oval blossoms, deep primrose with a very effective orange eye and a most delightful creeping form of growth, and those fond of very large flowers, with well-defined rays and strong growth, yet compact, will find in *Lord Salisbury* a typical flower. *Bartholdi*, a rich crimson-purple with neat yellow eye, has flowered in a wonderfully free manner, the brilliancy of its colouring standing out conspicuously. Of the blue shades of colour, *Britannia*, a deep violet-blue, stands pre-eminent. *Blue Gown*, *Magnificent*, and a charming little seedling named *Symphony* are three beautifully compact types of growth, while the profuse character of their flowering renders them almost indispensable at this season. The colour of the first two sorts may be described as mauve-blue, that of the latter sort being a pretty violet-lavender. Of the fancy type of flower succeeding well just at present is *Isa Ferguson*, with large purple-black flowers, paling off to light lavender on top petals. *Stobhill Gem*, a somewhat similar kind of flower, but not so dark and with more substance; *Cottage Maid*, alternately marked purple-violet and pale lavender; *Sunset*, pale yellow, with a broad crimson band on the upper petals, and very sweet scented; and *Butterfly*, very large white flower, with heavy margin of deep rose, form a very desirable and interesting quartette. One very fine sort named *Lucy Franklin* is free in its growth, and white, with sulphur-yellow suffusion of the lower petal. This has succeeded wonderfully during the last three weeks, and should be largely used where something unique may be wanted.

The foregoing sorts are well worthy of the attention of all wanting a striking and pretty display during the latter part of the season.

Higgate.

D. B. CRANE.

***Tropæolum speciosum*.**—For years I failed to grow this, but now it is an absolute weed with me. The great secret, I find, is uniform moisture for the roots to run in and the soil must be deep, sandy, and free. Where the *Tropæolum* now grows so freely was a corner of strong blue clay, absolutely useless. I cleared the space and carted on a mixture of soil collected in our woods. I made it about 4 feet deep, and the natural slope gave the required drainage. Various shrubs are planted here, up which the *Tropæolum* climbs. This year I trained some up spikes of *Yucca recurva*, which had a splendid effect on the north slope of this made soil. *Montbretia Pottsi* and *M. crocosmeiflora* make a complete hedge, and flower splendidly. The *Tropæolum* has been planted about six years.—J. R. HALL, *For Warren Gardens, Cobham, Surrey.*

It is to be hoped that few will venture to plant this beautiful creeper in their rock gardens, as, one would infer from a recent note, some are doing. It is difficult to establish at first, but once it gets a foothold, *Tropæolum speciosum* is only kept in bounds or eradicated with difficulty. In a rock garden it becomes a lovely object, but runs so rampantly as to be a pest. Like some of the *Convolvuli*, it requires to be planted where its naturally rambling and encroaching ways will do no harm.

Any readers of THE GARDEN who may wish to try *T. speciosum* will find March or April a suitable time for planting. The soil should be well trodden before and after planting. If snails or slugs are plentiful they are very troublesome until the creeper gets a good hold, which may be in two or three years.—S. ARNOTT, *Carsethorn, N. B.*

—In a recent issue "E. J." made some interesting remarks on this "when at home" gorgeous climbing plant. I have tried to grow it in this garden, but it only does moderately, and that behind a north wall where the growth takes possession of a Plum tree. It did very well in an old garden a mile from here in the stitish loamy soil of the Raspberry bed, the growth each season climbing amongst the canes in all directions—an undesirable position some may say—but I think the gardener had tried it in almost every other part of the garden and failed. The success he had with it leads me to think that my soil is too light for one thing, and does not retain sufficient moisture for its wants. "E. J." mentions its doing well further north, and as a proof that a cool, moist climate suits it, I may mention that in my employer's garden near Loch Awe, in Argyllshire, it grows and flowers quite freely.—J. CRAWFORD, *Coldhington Hall, Newark.*

**Carnation The Burn Pink** (p. 190) was raised at The Burn, near Brechin, many years ago by the late Wm. Lawie, gardener, who named it *Annie Lawie*. Many plants of it were given away, and some of the recipients who may have forgotten the name called it *The Burn Pink*. Years afterwards, when the Duke of Fife was married, a too enterprising nurseryman dubbed it *Duchess of Fife* and sent it out as a new variety. It will thus be seen that it has no claim whatever to be called by the latter name, and I think it should be known by its original name of *Annie Lawie*, if only as a souvenir of a very capable gardener who during a long service did much to enhance the many natural beauties of The Burn.—M.

***Helenium autumnale superbum*.**—This is now in flower, and I think it will prove a useful pot plant for autumn use. Grown in the ground it runs up very tall before it comes into bloom, but as a pot plant it may be had in bloom with a large head at from 2½ feet to 3 feet high, and younger plants will flower when about 18 inches high. It does not appear to throw up young shoots from the base so freely as most herbaceous plants, but cuttings root freely. The tops may be taken early in the spring. If they are taken after the plants have made a good growth, the old plants will branch out and a number of cuttings may be had from side shoots. Cuttings should be put in a hotbed or an intermediate propagating pit, a little bottom heat and sufficient moisture to keep the fleshy cuttings from flagging being all that are necessary. The tops produce the largest heads of bloom and come into flower earlier, but the side shoots will make nice plants and keep up a succession of bloom.—A.

***Gentiana acaulis*.**—For its bright display of blossoms in the early spring and summer, the old garden *Gentianella* is among the most prized of all hardy carpet plants, and on some soils is by no means difficult to please. In other districts, however, the plants are invariably unhappy, and while growing freely, or rather forming patches of rather diminutive growth, fail to give anything like an adequate flowering. This may be, of course, due to neglect rather than anything else, or, again, some deficiency in the soil may, in a measure, account for the poor growth. Too frequently the large patches are left too long without disturbance, which in this species is an error. It is equally wrong, inasmuch as only inferior results ensue when the plants are pulled to pieces and planted, as they are quite frequently, in spring at flowering time. During the latter period many hundreds of plants are sold because attractive, though the future of the majority of such plants would not prove very encouraging if followed up. Where the plant thrives it should be made much of, and no season in the whole year

is so well suited to dividing and replanting as the present. Planted firmly in good ground at any time during September or October, the losses are reduced to a minimum, the plants take readily to the soil, and continue making stoloniferous growth nearly all the winter, a fact that may be verified in the ensuing spring when the young shoots appear above ground. Over-dense patches often fail to flower freely, but with room for development they produce one of the brightest displays spring.—E. J.

#### ANNUAL ASTERS.

ANYONE interested in the annual Asters will find a large and complete collection in the gardens of the Royal Horticultural Society at Chiswick just now. But they are bewildering, as one sees the same thing under different names, and the matter is rendered more mystifying by reason of mere naming in this country of types which have originated in France, Germany and elsewhere. The trial at Chiswick may be said to furnish four types: the Quilled German, which has a tall branching and somewhat loose habit of growth but produces highly symmetrical and fully double flowers borne on long, stiff flower-stems; an admirable type to grow for cutting, because the flowers are produced freely and continuously, as they last much longer in a cut state than do the softer flat-petalled varieties. Next the Comet type, with its large, spreading florets, curving, and with a small centre of quilled florets. Of this type there are now several varieties ranging from blue to white. They are early bloomers, and when well grown produce very fine flowers for exhibition; indeed, they are driven all the other types of flat-petalled Asters from the exhibition tables. They, when well grown, reach a height of 18 inches or so, and the blooms are large, full and very handsome, and therefore is not to be wondered at they are becoming increasingly popular. The third type is that generally included under the head of *Chrysanthemum* flowered, embracing the tall *Victoria* and the dwarf *Bouquet* and *Mignon* types, all of which have compact, flat-petalled blossoms varying in size, all reflexing, but well filled in the centre, and singularly symmetrical. These are all very valuable garden varieties, most of them compact growth, and at the same time very free blooming. Until the *Comet* type came to the fore it was the favourite Aster for exhibition, and those who made a point of growing the *Victoria* Aster for show produced wonderfully fine blooms, thinning out the buds and mulching and watering the plants as needed.

The fourth type is that known as the French Aster, a fine form of which is known as *Truffaut* *Pleony*-flowered *Perfection*. This is a type of Aster requiring high culture to bring it to perfection; the petals incurve, and when fully developed form a compact half ball. But it is a long time to flower, and that is perhaps why it is not much grown as it should be. In the various exhibitions where French Asters are this should be the only one exhibited as such, but all flat-petalled varieties are now regarded as French Asters. The range of colour in the French flowered French Asters is greater than that observed in any other type, and this, added to their great beauty, makes them a desirable section to cultivate.

R. DEAN.

**African Marigolds.**—Some plants of both the orange and lemon varieties of these very effective autumn-blooming plants, grown by me in a very exposed field at Surbiton in small clumps and thinned, are blooming superbly and evoke the warmest admiration from all who see them. The seeds were sown on May 3 last, quite early enough for such tender things, especially as so soon the plants bloom profusely and finely all through the autumn, when some such bright colours are very welcome.—A. D.

**Canary Creeper.**—In the kitchen garden at Forde Abbey, Chard, Mr. Crook backs the kitchen garden flower borders with tall rows

of Sweet Peas. These, however, with the best of treatment soon become exhausted, and then a seed or two put in here and there beside the rows of Canary Creeper early in June produces sturdy plants that, getting hold of the Sweet Pea supports, run up them quickly, and as the flowers of the Peas give out they are

reason is that these Phloxes always show their finest form the first year when raised from cuttings. The second year they give several heads of bloom, but less fine. Does not that show that when it is so easy by propagation in the spring to have plants in plenty showing their finest form, it is undesirable to grow stock on in borders

now in great beauty in Messrs. Daniels' nursery, Norwich. The individual blooms are similar in size to those of auratum, but have a wide red band running throughout the entire length. It is pleasing to find Lilies receiving more attention, as when well grown they always pay for the labour and cannot fail to be admired. A large, round, elevated bed filled with *L. lancifolium rubrum* in the pleasure grounds at Blickling is now (the first week in September) a pleasing sight. The plants and flowers are much improved by giving a good mulch during the summer months. If the soil is allowed to become very dry, growth soon becomes weak and stunted. Unless in very sheltered positions, it is necessary to place neat sticks to the plants to prevent damage from high winds.—J. C.



*Acanthus mollis.* From a photograph by Mr. F. Mason-Good, Winchfield.

ACANTHUSES.

THE genus *Acanthus* occupies a prominent position among the best of the hardy fine-foliaged perennials, and for this reason, when well grown is worthy of special positions where the plants may remain and become a feature. Without previous knowledge of the plants it would scarcely be thought that the ordinary examples of these things obtainable in the hardy plant nurseries would in a few years develop into the giant proportions possible. Being of rather slow growth naturally, often three or four years elapse before the flowering stage is reached, even in the more robust kinds. One species, after a twenty-five years' experience among hardy plants, I have not yet seen in flower. I refer to the very distinct form known as *A. spinosissimus*, a plant by no means frequent in collections to-day. But while of slow growth generally, the *Acanthus*es are by no means uninteresting until the flowering stage is reached, for the handsome and picturesque leaves that are each year put forth are sufficiently attractive in themselves to merit attention. Nearly all the species are very robust, and for this reason require a rather strong loam or even clay soil occasionally, in which they find ample means of support. In proof of this I may state in passing an experience of some large examples that grew quite near the Crystal Palace many years ago. Much of the soil in the garden referred to was the output of the Penge tunnel, a soil of soft greasy clay, which, incorporated with the loamy soil of the garden, made an unusually deep-rooting medium for many plants. It may possibly have been more due to the increased depth of soil than to anything else that one of the most vigorous kinds (*A. mollis latifolius*) each year produced such a fine display of foliage and blossom. Planted in the foreground of a shrubbery having a belt of trees behind and a deep slope to a railway cutting near, the position was at once sheltered and well drained, the result being some of the grandest specimens I have seen, the fine leaves several feet in length, and the singular and striking flowering spike towering above all. It is in such positions and with a good depth of soil that the *Acanthus* or Bear's Breech, as it is called, invariably succeeds. As few plants provide such striking leafage, they are worth a little extra trouble. It is not that the plants are in any way fastidious as to soil or even situation; on the contrary, they grow quite freely in almost any good garden soil. But to make specimens of them, an extra depth of soil is needful, and the handsomest examples I have seen have not resulted either in a retentive clay soil or in one very hot and dry. Where a depth of 2 feet or 3 feet can be given, these plants will quickly make themselves at home, and in course of time hands me tufts 4 feet or 5 feet across, surpassing many of the

succeeded by the long growths and pretty yellow flowers of the *Tropeolum*, and thus a pleasing display, almost more beautiful than before, is furnished several weeks longer.—A. D.

**Perennial Phloxes.**—I am asked to explain why I think these hardy border plants should be lifted and either divided and replanted or thrown away after the second year's blooming. My

reason is that these Phloxes always show their finest form the first year when raised from cuttings. The second year they give several heads of bloom, but less fine. Does not that show that when it is so easy by propagation in the spring to have plants in plenty showing their finest form, it is undesirable to grow stock on in borders

**Lilium auratum rubro-vittatum.**—This new form of the well-known *Lilium auratum* is

so-called sub-tropical subjects in stately grandeur. Where space permits in the rock garden, one or two of these should be so planted that the deeply-cut and glossy leaves should cover portions of the rock. On the lawn, too, or a sunny slope a group of these would be effective; indeed, in almost any position where a good depth of soil is assured there need be little fear of success, and, provided they are well planted at the start, the plants may remain undisturbed for many years. Once they are well established they increase annually in beauty, and a few isolated examples six or eight years planted will constitute a feature in the garden. The majority of the species are quite hardy, or at least sufficiently so to pass through an ordinary winter with impunity. At the same time, in the case of fine specimens it will be best to give some slight protection in severe winters, as such things are not easily replaced. All the kinds may be increased by division, preferably in spring with returning growth; by seeds, if sown any time during the winter after being gathered; and thirdly, by cuttings of the roots. Of all these methods of reproduction, seeds when obtainable must take the first place always, as the root cuttings, while constituting a most prolific source of supply, and therefore great help in trade collections, considerably weaken any established plant. Young plants raised in private gardens for the further embellishing of the grounds should be planted in nursery beds for a year, or perhaps two, prior to placing them in permanent positions. Some of the best known and most worthy kinds are

**A. MOLLIS**, an idea of which may be gathered from the accompanying illustration. Not only is this one of the most showy and distinct, but it is also, when fully grown, a free-flowering species, the lofty spikes producing rose and white blossoms, very striking in the entire inflorescence. Native of Italy.

**A. MOLLIS LATIFOLIUS** is perhaps the best known of all. This is rather more dense and generally compact than the type, the flowers more closely arranged on the spike, and the foliage handsome in appearance. It is a vigorous and robust kind, and certainly the most imposing for purposes of sub-tropical gardening. This unique form should find a home in almost every garden. It is frequently grown under the name of *A. lusitanicus*, which is regarded as synonymous with the above.

**A. LONGIFOLIUS**—as may be inferred by the specific name—is very distinct, the leaves from 2 feet to 3 feet long, decidedly narrow in comparison, and when seen in the established clumps the whole tuft of leaves gracefully arching. This is especially valuable for the rock garden by reason of its characteristic habit of growth. The flowers are of a purplish rose in long spikes nearly 2 feet in length. Native of Dalmatia.

**A. HISPANICUS**.—This Spanish kind has large, shining, deeply-cut leaves and spikes of white flowers, and though an old species long known to botanists, is not well known in gardens at the present time.

**A. SPINOSUS** is a South European kind with purplish blossoms and deeply cut leaves, the divisions of which are terminated by a short, sharp spine.

**A. SPINOSISSIMUS**.—A very old, though still uncommon species in cultivation. It is perhaps the most distinct, as it is also the most spiny of the genus. It blooms in autumn, the beautiful rose-coloured blossoms being densely set on a long spike. The radical leaves are of a silvery hue, and the spines with which the deeply lacinated and pinnatifid leaves are clothed very acute and recurved. It is a handsome and striking species from South Europe—E. J.

—They have long been grown in English gardens, but it is now rare to find the plants well placed as regards effect—a point so little thought of by gardeners generally. Spending

many nights over wretched diagrams in which colour is treated as ignoble, flat colour only, the way the decorator has to look at it mostly, how few turn their thoughts to the far higher and more interesting question of how to place well, things that have beauty of form as well as colour. There are many instances in our gardens of plants of great beauty of form never being noticed owing to the thoughtless way in which they are crowded among other things or seen in single starved specimens. Among these plants we find the *Acanthus*, often starved and ill-placed and even flowerless, though well placed and in handsome bloom it is often striking for its beauty of flower. Indeed, we cannot get the best of it unless by putting it in conditions in which it flowers well, that is to say, sunny places and warm soils if we have any, although this it does not always exact, and we have it growing very freely on coldish soil. There are several kinds of *Acanthus*, but really not much distinction from the point of view of effect, and the best way is to take the boldest forms, particularly the one called *latifolius*, making, from the gardening point of view, always far more of their effect than of any botanical distinctions. As to where to place *Acanthuses*, they will do with the least care and give no trouble in cultivation round fountain basins, at the foot of stone walls or piers, or in sunny corners in court-yards. These are among the places in which the fine foliage will strike people most, and the plant will be still more interesting if it flowers finely. But wherever we place it it cannot fail to be noticed if the plants have room and good soil to thrive in, and, above all, are grouped together in visible quantity.

**Lilium lancifolium**.—The varied forms of this old-fashioned Lily are still hard to beat either for pot culture or for planting in open sheltered borders of nice, light, well-drained compost. The *rubrum* and *album* forms are now making a brave show in the Castle Gardens, Norwich. They are planted down the centres of narrow beds on well-kept grass, being margined on either side by *Rudbeckia Newmanii* and other similar height herbaceous plants. For placing in windows in front halls or at the foot of staircases in large mansions and grouping with other plants in autumn, these Lilies, grown into large specimens by placing some half-dozen bulbs in a 10-inch or 12-inch pot, are most useful. Two bulbs in a 6-inch pot produce just the right sized plant for dotting in convenient places in artistic groups at exhibitions, surrounded by graceful greenery to hide the somewhat rugged stems. Well drained pots, a good loam and a little decayed manure free from worms suit them well.—C. C. H.

#### FLOWER GARDEN NOTES.

**HERBACEOUS PHLOXES**.—I quite agree with Mr. Jenkins in his remarks as to the advisability of retaining herbaceous Phloxes in the same quarters for something like three or four seasons, and if the practice leads to good results alike at Hampton and here, where the soil is dry and light, there must be something to be said in its favour. Annual renewal is certainly not satisfactory if big masses of colour are required; individual pips are very fine, but the trusses are neither so large nor the growth made nearly so vigorous. Where plenty of time and labour is available to plant very carefully, mulch heavily and give occasional soakings of liquid manure should the weather prove hot and dry, I say nothing against annual planting, but if the plants have in a great measure to shift for themselves, it is certainly advisable to leave them in the ground. Naturally, a shift should always be given as soon as the clumps show signs of deteriorating. I find it advisable when planting to work in a little stuff a bit stiffer than the natural soil and mulch heavily.

**STATICE LATIFOLIA**.—I noted a week or two ago how seedling plants of this Sea Lavender vary in time of flowering, and have picked out several distinct things in a batch of seedlings so far as their season is concerned, and also in the size and

depth of colour of the tiny individual flowers. A decided boon in connection with flowers of this type is a batch of *Gypsophila* under a north wall, which comes in much later than plants in the open, and is just now (the second week in September) at its best.

**HYDRANGEA PANICULATA**.—Have any correspondents experienced a difficulty with this plant in the way of a sudden and mysterious collapse? My plants have kept all right as yet, but one or two friends chronicle disaster, and the worst part of it is the collapse seems unaccountable. Certainly it could not have been owing to any severe visitation of frost, as the winter was by no means hard. Where a number of large plants go off in prominent positions, a gap not easily filled late in the year is made. I wonder if the practice of very severe pruning, *i.e.*, taking out every bit of small, weakly growth and heading back the strongest shoots to one or, at most, two buds, has anything to do with the failure. We know that plants of vigorous habit are sometimes apt to resent such hard cutting in, and it struck me if such treatment was continued for many seasons, it might possibly be answerable for the collapse of the *Hydrangeas*.

**CHRYSANTHEMUM FLORA**.—This is one of the most useful of the early-flowering pompons for outdoor work and gives a bright mass of colour from the middle of July right away until nearly the end of the season, a speciality being the number of buds produced and the manner in which they are all developed. In its special colour it recommends itself to the notice of those who are supposed to keep the garden gay until the approach of frost, the other best things from this standpoint being yellow *Marguerites* and Mrs. Clibran *Tropeolum*.

**MARGUERITES**.—Large plants of these will be found extremely useful for standing about occasionally in glass porches, corridors, or in large greenhouses and conservatories, and, given care in watering and enough warmth to keep away frost, they will give a fair display the greater part of the winter. Plants in the open both of the white and yellow varieties that were put on early in fairly good soil will now be over 3 feet in height and as much in diameter, and if they are cut round at twice, say, a fortnight, and a week before lifting, taken up and put into small tubs, pans, or large pots, they will be found very serviceable. It is advisable to place them in partial shade for a week or two after lifting and when housed a sharp look-out must be kept for maggots. Touching this pest, the same care should be taken in propagating, any shoots showing a sign of the excrescence indicating the presence of the insect being cast on one side.

**PINKS**.—I never remember a better strike of Pinks than we have this season. Older sort always root well, but some of the newer kinds are not always so free, and it has sometimes been found advisable to layer in preference to propagating from cuttings, or rather to adopt the former method in case the latter was a partial failure. With Her Majesty, Ernest Ladhams and Snowdon plenty of good stock for another season is thereby secured. Albino, a new kind on trial this year for the first time, is very distinct, pure white in colour, petals smooth edged, habit free and vigorous. It is a grand white button-hole flower, the blooms very shapely and the calyx remain intact with no sign of bursting. Pinks of what ever shade are very acceptable border flowers, and may be introduced into the formal garden with the best results if something is planted to give a contrast with flower or foliage or with both. I know of nothing better for the purpose than *Lobelia cardinalis*.

**USEFUL FINE-FOLIAGED PLANTS**.—The mention above of *Gypsophila* and the Sea Lavenders, and the knowledge of the many uses to which they are put in connection with cut-flower work, remind me of several fine-foliaged things that prove very useful. The lemon-scented *Eucalyptus* probably I think, even a more powerful odour of this particular nature than the *Aloysia*, and side shoot of fair length mix well with many different

lowers. It is advisable to sow this early and grow it along quickly before planting, so that these same side shoots should be quickly developed. It would doubtless, like the *Aloysia*, come through an ordinary winter safely with a little protection. The experiment might be tried by planting close up to the angle of a wall, not that the plant should be confined at all to this through the summer, but that the branches are loosely tied up at the approach of winter they could be slung to the wall and protection more readily afforded. *Thalictrum aquilegifolium* is not so finely cut as the smaller variety, but it is much more vigorous, and good long sprays of the foliage are very acceptable. It will do very well in partial shade. *Tamarix gallica* does not grow so vigorously as in closer proximity to the sea, but I find an occasional plant in the shrubbery orders very useful. Of the scented *Pelargoniums* with finely-cut foliage, perhaps the best for the purpose under notice is *filiceifolium*. Fine long leaf-stalks, the better adapted for utilising with flowers, can be obtained by pinching back and occasionally removing side breaks.

E. BURRELL.

### AUGUST IN SOUTH DEVON.

During the month rain has fallen to the extent of 3.31 inches on 20 days, against 1.03 inches on 11 days in August, 1896, the average fall for the month being 2.75 inches. For the first 8 months of the year the rainfall has amounted to 23.84 inches, the average fall for the period being 2.81 inches, while in the corresponding 8 months of 1896 but 9.17 inches fell.

Of sunshine there have been 217 hours 35 minutes, which is considerably in excess of the average of 100 hours, and slightly above the amount registered for August, 1896—namely, 209 hours 25 minutes. For the past 8 months 1339 hours of sunshine have been registered, against 1364 hours 25 minutes for the same period of 1896, and an average of 162 hours 55 minutes. The mean temperature has been about normal, being 61.2° against 61.0° for August, 1896, and an average for the month of 61.5°. The highest screen reading was 72.1° on the 6th, and the lowest 49.5° on the 27th. The wettest grass reading was 47.4° on the same date, and the highest sun temperature 120.4° on the 9th. The total horizontal movement of the wind has been 7977 miles, which shows the month to have been considerably more boisterous than the corresponding month during the last 2 years, but not quite so rough as August, 1894. The windiest day was August 21, when 518 miles' run was recorded in the 24 hours, the highest hourly rate being reached between 2 and 3 p.m. on the same day, when a speed of 26 miles was reached.

In the wild garden the tall blue Monkshood (*Aconitum Napellus*) has been blooming in company with the Golden Rod (*Solidago ambigua*), while the great *Acanthuses*, with which are associated *Gumeras*, *Funkias* and *Canna Ehmanni*, have thrown up tall blossom-spires of white and pink. *Aemone japonica* Honorine Jobert, in large clumps over 5 feet high, is covered with its white golden-centred blossoms, dozens of which are cut daily for indoor decoration, their pure colouring and simple form rendering them eminently suitable for artistic floral arrangements. *Phillea ptarmica* fl.-pl. The Pearl continued in bloom well into August, and the white *Antirrhinum* is still in flower, while the pale blue of *Guthaea colestis* gives a pleasing note of colour to the border. *Astromeria aurantiaca* was in full bloom at the commencement of the month, in which time the hybrid varieties were flowering. The tuberous *Begonias* have done well, and a large bed of erect-growing scarlets has been a blaze of colour, the frequent rains having kept the plants growing, whilst not diminishing their flowering. *Marguerite* Carnations have been coming well, and those that are to be potted up this month, from which the flower-buds have been picked off as they formed, are healthy, bushy plants that will furnish a good supply of welcome bloom during the coming dark days. In potting these care should be taken not to use too large

pots, one of the secrets of success being that the roots should thoroughly permeate the soil before growth is finished for the year. The large-flowered *Cannas* are still beautiful, and show to the best advantage when associated with the dark-foliaged *Ricinus Gibsoni*. The fine-leaved *Canna Ehmanni* *iridiflora* is an object of beauty, but has not bloomed with such freedom as was the case in the preceding year. The tall flower-spikes of *Chelone barbata*, with their pendent scarlet blossoms, create a charming effect when a breadth a yard or so in diameter is grown. *Campanula pyramidalis*, with its tall spikes of white, purple and French-grey flowers, some 6 feet in height, has been a fine sight at the back of the herbaceous border, some of the plants that have been two years in the ground having thrown up as many as twenty flower-spikes. This *Campanula* is often seen growing well as a pot plant in cottage windows, the tall flowering stem being bent over till it arches from side to side of the lattice in a floral wreath. *Campanula turbinata* and *C. t. alba* have also been in flower. The strong-growing *Chrysanthemum maximum* has borne its white Daisy-like flowers in profusion, but is a plant that requires early and intelligent support, failing which it assumes an untidy appearance, that staking at a later date merely intensifies. This may also be said of the more valuable *Pyrethrum uliginosum* and of the taller of the perennial *Asters*, of which *A. Novi-Belgii* Harpur-Crewe is now in bloom, as are the dwarf-growing *A. dumosus* and the large-flowered *A. Amellus bessarabicus*. When tall-growing herbaceous plants are staked whilst making their growth, by several green-painted Bamboo canes being thrust into the clump and lightly looped together with tarred twine, the shoots growing naturally amongst them soon render them inconspicuous whilst receiving the necessary support. *Coreopsis grandiflora* has continued its display throughout the month, though giving signs that a limit will soon be set to its continued flowering. A bed of *Crimm capense* in the neighbourhood is now a striking sight, a dozen great flower-scapes rising above the wide curving leafage. *Cypella Herberti*, alluded to in my July notes, flowered continuously through the month, and is still expanding blooms. The rosy purple of the autumn *Crocuses* (*Colchicum autumnale*) is evident here and there, and on grassy banks the colour is set off to the best advantage, contrasting prettily with the vivid green.

*Cactus Dahlias* are now at the zenith of their beauty, and new and valuable varieties being added each year, there is now a lengthy list to choose from. It must be admitted that as regards form and colour, Juarez, the originator of the race, has never been excelled, but in habit this plant leaves much to be desired, being a sparse bloomer and usually having its short-stalked flowers hidden by foliage. Good scarlets are *Gloriosa*, *Professor Baldwin* and *Starfish*, while in *Mrs. A. Beck* the scarlet possesses a tone of orange. *Mayor Haskins*, crimson, and *Harry Strudwick*, dark crimson, are also good varieties. Nothing has yet been produced to beat the velvet-maroon *Matchless*, but *Bridesmaid*, sulphur and pink, appears to be an improvement on *Delicata*, the flowers of which latter are often hidden by its leafage, and occasionally revert in shape to the decorative type. Of yellows, *Lady Penzance* and *Blanche Keith* are excellent in form and colour, whilst *John H. Roach*, rather lighter in tint, is also good. Beauty of *Arundel* is a glowing lake in colour, but is surpassed in shape by the new *Cycle*, which is much similar in hue. Less progress has been made in whites than in any other colour. *F. C. Smale* belongs rather to the decorative than *Cactus* type. *Mrs. A. Peart* almost invariably comes with an open eye, and *Mrs. F. Fell*, though at its best a pleasing ivory-white of good shape, is often unsatisfactory. A few blooms of *Doronicum plantagineum* Harpur-Crewe have been forthcoming from time to time, and *Erigeron speciosus* in shady spots continued its flowering well into August, while the Mexican *Daisy* (*Erigeron mucronatus*) has been in full bloom throughout the month. *Galega officinalis*

*alba* produced its pea-shaped blossoms in profusion, associating well with late-flowering plants of *Lycnis chalcidonica*, while the stately beauty of the white *Caps Hyaenanthus* (*Galtonia candicans*) was enhanced by the glowing scarlet of *Gladiolus brechenleyensis*, and in another situation by the blue of *Salvia patens*. The orange and black of *Gazania splendens* and the crimson and gold of the *Gaillardias* formed bright breadths of colour in the border, while the scarlet *Genm coccineum* gave a high note of colour. *Gypsophila paniculata*, a fairy-like sight at the commencement of the month, with its myriad minute blossoms and delicate tracery of its thread-like flower-stems, was soon past its best, to be succeeded by the beautiful *Sea Lavender* (*Statice latifolia*), whose inflorescence, though perhaps lacking the exquisite refinement of the flower-lace of the *Gypsophila*, is very lovely and well adapted for decoration when cut. The *Hydrangeas* have throughout the month been flowering grandly, billows of pale blue bloom around the Elm tree boles, massive blooms varying in colour on different plants, ranging from bright pink to white, from grey to Forget-me-not blue, while on some large bushes flowers of various tints were to be seen. The perennial *Sunflowers* give the garden a golden glow, *Helianthus multiflorus* and *H. m. Soleil d'Or*, *H. latiflorus* and *H. rigidus* being in full bloom, while *H. rigidus* *Miss Mellish* has commenced to expand its fine blossoms, and *H. giganteus* has its tall line fringed with pale saffron. The glowing spikes of the *Torch Lilies* (*Kniphofia*) give fine colour to the garden, and appear to best advantage when seen afar against a background of evergreens. Of the *Lilies*, *L. pardalinum*, *L. canadense*, and *L. superbum* were in flower at the commencement of August, the former being especially fine, some of the stems reaching a height of 7 feet and bearing as many as forty blooms. The handsome scarlet *Turk's-cap* (*L. chalcidonicum*), with its vivid vermilion blossoms, has also flowered well, and its blooms having the desirable quality of lasting well, remained an object of beauty through the greater part of the month. *L. Humboldtii*, with its orange-purple spotted flowers, grew to a height of 6 feet and blossomed well, as did *L. auratum* from a batch of cheap imported bulbs planted in 1892. These from the first have done fairly well, though planted in ordinary garden soil with little care; whereas some fine home-grown bulbs procured at the same time, which were planted in a specially prepared bed, each bulb being surrounded with silver sand, disappeared entirely after the first year. *L. speciosum* has been flowering well, as has *L. tigrinum splendens*, while *L. tigrinum Fortunei*, the best of the *Tiger Lilies* with me, has just commenced its display. *Lobelia fulgens* is now the most brilliant sight in the garden, many dozens of tall vermilion flower-spikes rising out of a bed of *Salvia patens*. *Lobelia rosea* is also flowering well, but the soft pink has a washed-out look after the eyes have been dazzled by the vivid tint of its more showy sister. The old crimson *Bergamot* (*Monarda didyma*) concluded its flowering in the first week of the month, but its white variety and *M. hirta* were in bloom until its close, while the orange-scarlet *Montbretias* brightened the garden with their handsome flower-scapes during the greater part of August, and *Oxalis floribunda rosea* was still a breadth of bright pink. *Phygelis capensis* has produced its showy crimson flower racemes, and the dwarf *Polygonum capitatum* has carpeted a bank with its modest blossoms, while the calyces of the *Winter Cherry* (*Physalis Alkekengi*) are already showing an orange stain. *Plumbago Larpentea* has covered a portion of the rockery with its deep blue, and *Plumbago capensis* has shown off its charming light blue flower-clusters to the best advantage against a red cliff facing the south-west. *Oenothera Lamarekiana* has, after being relieved of its first flower-spike, bloomed freely from side shoots, and the single and double forms of *Iceland Poppy* (*P. nudicaule*), though not as showy as in the past month, have expanded a fair amount of blooms, while a

few fragile blossoms have appeared now and again on the clumps of *Papaver pilosum*, and the Welsh Poppy (*Meconopsis cambrica*) has borne occasional pendent yellow flowers. The Tufted Pansies are still blooming in shady nooks, while the herbaceous Phloxes, crimson, salmon, and white, have been fine masses of colour, and the yellow Paris Daisies, now large bushes, have been thickly studded with their clear saffron stars. The Sweet-scented Tobacco (*Nicotiana affinis*) still renders the fast-shortening evenings odorous with its



*Fritillaria kamschatcensis.*

sweet perfume, mingling its essence with that of the second bloom of the old double Rocket. *Rudbeckia Newmanii*, in masses a yard in diameter, has been covered with its orange, black-centred flowers, and the delicate blue of *Scabiosa caucasica* has acted as a foil to the gorgeous colouring of the *Tigridias*. *Sedum Sieboldi* is now coming into bloom, and *Tradescantia virginica* has produced a second crop of deep violet-purple blossoms, while *Zauschneria californica*, which grows strongly here, is bearing a good crop of scarlet flowers. The Plume Poppy (*Bocconia cordata*) has flourished amazingly this year, some of its shoots being 8 feet in height. Associated with Bamboos and fine-foliaged plants it is most effective, its glaucous leaves, with their white undersides, and the ivory and brown of its large flower-panicles being in marked contrast to its surroundings. *Erythrina Crista-galli* has grown over 5 feet high, and has produced a quantity of handsome crimson flower-spikes, some of them over 2 feet in length. This plant is very showy in the garden, and here passes the winter in the open air with impunity. The spikes, cut at their full length, make a telling arrangement for a tall vase. The Tea Roses have been rather spoiled by the rain storms and bluster-

ing winds, but sufficient have always been forthcoming for indoor decoration. The single white Macartney Rose is blooming freely, no day passing without some chaste blossoms expanding. The *Salmiglossis* still holds its place as the handsomest annual in the borders, but the scarlet *Zinnias* are at this season of the year most showy, and the Ivy-leaved *Pelargonium Souvenir de Charles Turner* has a delightful distant effect when hanging, a mass of cherry-pink flower-trusses, over grey stone. *Solanum jasminoides* has increased in beauty for the last three months, and now from eave to basement is studded with white flower-clusters swaying loosely from its pendent shoots. The scarlet *Tropaeolum Lobbianum* has had a brilliant effect, as has a late-flowering shoot of *T. speciosum*, while *T. tuberosum* is bright with its orange and scarlet blossoms, standing out on long stems from the blue-green leaves, and *T. canariense* threads a golden trail through a dark-leaved *Berberis*. *Eccremocarpus scaber*, though less striking than the climbers mentioned, is not unpleasing in colour, and is here a hardy perennial. The Everlasting Pea (*Lathyrus latifolius*) has covered an old outhouse with its white blooms, through which here and there the red and yellow flowers of *Mina lobata* show. *Physianthus albens* flowers and fruits abundantly in the open, and is now a mass of blossom on a perpendicular cliff wall. Tall specimens of *Aralia spinosa*, Palm-like in appearance, have been blooming freely, and large bushes of *Hibiscus syriacus* have been white with flower. The standard *Magnolia grandiflora* has generally eight to twelve creamy-white cups open above its glossy leaves, and in the neighbourhood *Catalpa bignonioides* has been in blossom. S. W. F.

## GARDEN FLORA.

### PLATE 1137.

#### FRITILLARIAS.

(WITH A COLOURED PLATE OF F. WALUJEWI.\*)

AMONG hardy spring-flowering bulbous plants, few genera possess so large a number of beautiful and interesting species. Some few kinds are well suited for naturalising in semi-wild or woodland gardens, and in such places, where the Bracken grows several feet high each year, various kinds of *Fritillarias* will grow, flower and increase admirably. For such purposes the Snake's-head *Fritillary* (*F. Meleagris* and varieties), also the Crown Imperial group (*F. imperialis*), are well suited. A mixed arrangement of white and coloured kinds of *F. Meleagris* in the grass in spring is very pleasing, while there are still a few that have an especial value when grown in pots. The group itself, though extensive and varied, even now affords great scope for improvement. The need for a series of kinds having brighter and even more attractive colours for the garden is apparent when one looks at the incessant green or dingy

purple tints in the hope of catching a trace of something whereby to identify a certain kind hereafter, though generally in vain. And when purple and green, or possibly a sort of leaden hue, are combined, it is difficult indeed to describe that flower. Even in the Crown Imperial section there is plenty of room for improvement in the rather dull red shades of some of the kinds, to which a pure white or good scarlet would prove decided acquisition. In respect to their

#### CULTIVATION,

the majority will grow quite freely in warm positions in sandy loam, and with soil of good depth also; indeed, most garden soils, provided these are not too cold and retentive, will accommodate a fair number of the ordinary kinds, such as *F. Meleagris*, *F. imperialis*, and others. The latter are, as a group, somewhat partial to a rich as well as deep soil, and in such not only build up bulbs of great proportions, but produce vigorous stems and handsome heads of blossom. Too frequently these are wrongly placed in the garden. Some attention should be paid to planting in a position where they are shaded from the mid-day sun. Frequently the Crown Imperials may be seen planted on south border near a wall, and in such places the flowers are not only small in proportion, but short-lived and generally disappointing. In the spring garden these Crown Imperials are a unique, and for this reason alone the bold vigorous heads of blossom are worth consideration. Worthy of special mention here is the *latifolia* section. Its bold, vigorous habit and varied inclination should render it a good parent, particularly so the variety known as *nobilis*, with its deep crimson-coloured blossoms. Indeed, in this group alone there is material for improvement that should not be lost sight of, the flowers being bold in many instances and of good substance, together with perfect hardiness. Only a few, and these t



*Fritillaria Meleagris.*

most precious, of the dwarf species appear to demand something more than ordinary care that is if we would have them in perfection. Refer to such beautiful kinds as *aurea*, *pubida*, *Moggridgei*, *recurva*, and such like species; t

\* Drawn for THE GARDEN in Messrs. Barr and Sons' nursery at Thames Ditton by H. G. Moon. Lithographed and printed by J. L. Goffart.

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FITILLARIA WALTERI EWING



These are dwarf, and among the most beautiful of this genus for pot work or the rock garden; but as some at least of these and others need more than ordinary care, it will be best referred

smaller-growing and rare species that they be planted in this or the following month. The following are some of the most beautiful species and varieties, some at least of



*Fritillaria imperialis.*

in detail later on. Among other things of primary importance in their cultivation is that of planting. Some species and usually their varieties may be kept a long time in the dry state with impunity. Among these, *imperialis* varieties and *Meleagris* also may constitute fitting illustrations. These kinds I have kept quite dry till very late in the year, and in the case of *F. imperialis*, which has been kept dry for the express object of its flowering late for a certain spring exhibition, the results have been as instructive as they were surprising. Of course, such a finely formed bulb has an abundance of stored-up energy that a week, more or less, in the dry state would mean nothing at all, and this, indeed, has been on more than one occasion abundantly proved. Kept perfectly dry and without emitting a single root in a year uniformly cool and airy, and therefore out of the soil for nearly two months after the majority of such things had been planted, it was hardly expected that less than a week would separate their time of flowering in both halves. Yet this is exactly what happened, and not only with *Fritillarias*, but with most bulbous plants it is the same, there being no comparison whatever between the time of retarding and that of actual flowering. The most noticeable feature with such things is a shortened growth, which is the least desired. It is very interesting, however, to note that while increased warmth will hasten flowering in such things, the cold as well as dryness at the root have not a retarding influence in like degree. And very singular is it that the stature of the plant only, and not the height of bloom or the period of blooming, should have been changed. In other kinds differently constructed, as, e.g., *F. recurva* and others, prolonged delay in planting is not only injurious, but almost fatal; and while one may recommend September for planting generally as a good and safe time, it is essential with the

which should be found in every garden. Taking them in alphabetical order—

*FRITILLARIA ALPINA* comes first. This is a neat and pretty species, of dwarf growth, and bearing drooping flowers that are chocolate on the outside and yellow within, while its margin of brighter yellow gives the flower a pretty effect. It blooms quite early in spring and is of easy culture.

*F. ARMENA*, from Asia Minor, is also a dwarf form, producing pretty freely its soft yellow bell-shaped blossoms on frail stems less than 6 inches high. This kind is best suited for sunny spots in the rock garden or for planting freely in pots or pans for very early flowering. A soil of peat and loam suits this admirably. Next in order is

*F. AUREA*, undoubtedly one of the gems of the whole race and certainly the best of the dwarf flowering species. As a pot plant in the cool house quite early in the year it will hold its own with any, while the lovely masses that have been grown at Kew of late years stamp this as one of the most exquisite of hardy spring bulbs. Equally good and effective is it in the open, though from its naturally dwarf habit of growth such beautiful plants appear to require a dwarf evergreen carpet through which they may spring and that would give protection to the lovely golden flowers of this handsome species. But such carpets must of necessity be plants of very dwarf creeping growth, such as some of the smaller mossy *Saxifrages* or *Anubrietas*, that do not mind frequent disturbance and are easily replaced. Of course, a neat grassy slope, where *Primroses*, *Snow Glory*, and *Snowdrops* abound, would be a veritable home for such a plant, though, failing this, a carpet of *Sedum aere* (not the golden form to clash with the lovely blooms of the plant in question), or, again, *Sedum hispanicum* or its variety *glaucum* would

make the most perfect carpet possible, taking the least from the soil and giving the least possible resistance to the plants below. No member of this genus is worth greater care than this one, and a free, rich soil of sandy peat and loam with a little manure added will be found the most suitable. It is a native of Silesia, with large drooping golden blossoms faintly chequered with brown.

*F. CYRINA*, as also its variety *reticulata*, have prettily formed flowers, distinctly bell-shaped, the former citron-green, the latter yellowish and striped with reddish-brown. It is about 9 inches high and flowers in April.

*F. IMPERIALIS* and varieties constitute, for the border at least, the showiest and boldest of this useful race of plants. The value of their free and quick growth in early spring cannot well be over-estimated, the established plants or strong bulbs rising to nearly 4 feet high, with handsome foliage and stout, fresh green stems, terminated by a cluster of handsome drooping flowers, and above all a feathered tuft of leaves at the summit of the stem. The blossoms, which in all the varieties are by far the largest of the genus, are of various shades of colour, and either in mixture or alone make quite an imposing display. Of considerable worth are such things in semi-wild places or in the shrubby border where the bold spikes of blossom will not fail to attract attention. Naturally such vigorous-growing subjects do best in a deep, well-enriched soil, and though somewhat opposed to frequent removal, should be replanted at least every three years. Replanting may be done in August and September, placing the bulbs about 6 inches deep, while bulbs in the dry state may be planted for some weeks longer. The shades of colour include yellow, sulphur, red, orange-red, and so on, while a variety with red blossoms and beautifully variegated foliage is well worth growing.

Another group that promises to assume considerable importance is

*F. LATIFOLIA*; indeed, already it contains a good variety of different shades of colour. Bo-



*Fritillaria Meleagris alba.*

tanically this is included under the Caucasian species *F. lutea*, a somewhat variable plant, while the variety *latifolia* has given many shades

of lilac, purple, yellow, and black flowers. Too numerous for the purposes of this note are the varieties that have already received distinctive names. One handsome kind, however, *F. latifolia nobilis*, has this year been honoured by the award of merit from the Royal Horticultural Society. This has handsome blossoms, deep blood-red in colour, beautifully tessellated internally, and quite hardy, as, indeed, are all the set, and about 9 inches high. This kind has been very noticeable both at Kew and Ditton during the past spring. Many varieties of this group attain to nearly a foot high, and by their bold varied blossoms are very attractive quite early in the year.

*F. MELEAGRIS* (Snake's-head *Fritillaria*), with all its beautiful forms, is from an all-round point of view perhaps the most useful for the garden, and likewise for cutting. To the British gardener this plant should prove doubly interesting on account of its being a native of some parts, though more particularly of the Oxford meadows and pastures, a fact alone that should at once indicate its value in semi-wild or grassy parts of the garden. Though becoming more and more scarce in the wild state in Britain, the important fact of its being found frequently in moist meadows should not be lost sight of when cultivating the plant in all its forms; while its fondness for a certain degree of moisture, or even shade in lieu of the latter, may frequently be noted in any garden where opposite conditions are afforded it. The whole group is of the easiest culture, growing and flowering freely in any good loamy soil, always bolder where shade and some moisture are at hand. Graceful and elegant in habit, and attaining to nearly 2 feet high when established, the species may often be seen in cottage gardens in spring-time, flourishing year after year with little or no care. Particularly good is the nearly pure white variety, which has scarcely any other marking when freely grouped in grassy spots in partial shade. In the garden proper or for vases this may be also used to advantage; and, further, it is well worth isolating and seeding freely in the hope of a still purer and better white being secured. Of the intermediate shades there are many, and these being obtainable at a very cheap rate, may be freely used in various parts of the garden. Planting at 4 inches deep may be done from August to end of October.

*F. MOGRIDGEI* is a beautiful kind fairly well known in cultivation, with handsome drooping blossoms of golden-yellow, prettily chequered with chestnut-brown on the inner surface. It is a dwarf and valuable kind, requiring treatment identical with *F. aurea* above noted. It is a native of the Maritime Alps, and one of the choicest of this family.

*F. ORANENSIS* is a pretty Algerian species, growing 8 inches or 9 inches high and producing rather small though pretty flowers of yellow and purple-brown.

*F. PALLIDIFLORA* is a distinct species from Siberia. It grows about a foot high, and has pale yellow blossoms prettily chequered internally. The flowers of this are more widely extended at the mouth and squarely shouldered, owing to the keel-like prominence of the base of the segments externally, the broad foliage being of a distinctly glaucous shade.

*F. PUBICA* is a chaste and lovely species, the blossoms of a clear golden-yellow, about three-quarters of an inch across and distinctly campanulate in form. For its small size the blossoms possess considerable substance, and when grown in frames quite early in the year last a long time in perfection. It is in every respect a superior plant to the greenish-yellow *F. armena*, the latter also more frail, while the above has a stiff, erect leafy stem about 6 inches high. For pot culture or the choicest positions in the rock garden this really delightful plant is well suited. During the past two years this species has proved one of the most attractive in the early spring exhibitions, while in the present year Messrs. Wallace brought up handsome masses of it to show its permanent

value when thus grown. Not the least attractive part of the plant is the pleasing fragrance of its golden bells which have a neat and pretty appearance at the summit of the linear and somewhat glaucous leaves and stems. The plant is a native of the Rocky Mountains and portions of California, where it forms a great attraction in the early spring flora. It is quite hardy, and, grown in a rather rich mixture of loam and leaf soil with plenty of sand and a little manure, makes a charming show of its blossoms, these appearing in profusion for some time. The species, which has several varieties little known in cultivation, is readily increased by the small offsets that occasionally spring up like seedlings about the base of the larger bulbs.

*F. PYRENAICA* is a distinct species, with handsome plum-coloured flowers, beautifully reticulated internally, which is also of a yellow shade. The flowers are somewhat reflexed at the mouth. It is an easily-grown kind, flowering in May and early June. Height, 1½ feet. Southern France and Spain.

*F. RECURVA* is one of the rarest to flower, and, perhaps, also one of the most difficult to manage. The stronger bulbs should be planted 4 inches deep in a perfectly drained position in the rock garden, where the proximity of a large stone will afford some shelter. The species is as distinct in its somewhat flattened bulbs, which in this kind is an aggregation of fleshy, roundish nodules, as it is in the scarlet recurving flowers, which are very beautiful when the plant becomes quite strong and established. In Mr. Barr's nursery at Ditton this year, in one of the many shelters that obtain there, the plant was growing nicely in a light peaty mixture, some of the stems bearing as many as five of the beautiful flowers. In its Californian home the plant is said to produce stems 2 feet high and as many as nine blossoms on a stem. The largest I have seen, however, were less than half this height, but doubtless in favoured parts of these islands where the plant may also be treated specially in a sandy peat and loam of good depth, with moisture during the spring months, an improvement may be noticed. Left alone for a year or two, the plants may eventually flower more satisfactorily. After flowering the bulbs incline to break up or to give offsets more freely from the fleshy granules which compose the root-stock in this species.

*F. SEWERZOWI*.—Though distinct in flower, the growth of this species is not unlike that of a small *F. imperialis* var., yet quite devoid of the robust character of the latter. In the different examples I have seen the flowers vary from bronze-green to vinous purple and of a greenish yellow shade within. The large drooping blossoms are disposed in a loose raceme and attain 2 feet high. It is a native of Turkestan.

*F. WALUJEWI*.—This, the beautiful and distinct species to which prominence is given in the coloured plate, belongs to the more recent additions to this group, though for some years known to botanists. This beautiful species was exhibited in April last before the Royal Horticultural Society, when it obtained the award of merit. It is worth a place in all collections. Externally the blossoms are whitish and shaded with dove colour, internally prettily marked with white on a crimson-brown ground. There are, however, varying degrees of these shades in the collected plants. The species is quite hardy, succeeds well in loam and peat, attains 15 inches high, and comes from Turkestan. The large, solitary drooping blossoms are distinct and handsome in appearance, and, as seen in a large group at Ditton in the past spring, produced a very fine effect.

*F. WHITTALLI*, another modern introduction, is not less beautiful than the last, from which, however, it is quite distinct, the blossoms, of a red-brown on a yellow ground, being beautifully tessellated on both surfaces. This very handsome kind, which at present is not perhaps generally known, received a first-class certificate from the Royal Horticultural Society during the spring of

1896. The plant is of easy culture and will for a good companion to the one above-named.

In the above list will be found some of the most worthy species, as also a few of the more recent novelties. A complete list has not been attempted, and of necessity many interesting and beautiful things have been passed over. Those, however, who desire fuller information of these important spring flowers should endeavour to arrange a series of visits to Kew or Ditton early in the year, where very full collections may be seen in bloom. At Kew Garden such distinct kinds as *tenella*, *plurifolia*, *rutemica*, *Thunbergi*, *conica* with others have been noted during the present year. In this way will be easy to avoid the dull and useless kind that possess little or no value for the flower garden or even the woodland. E. J.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

GENERAL WORK.—Although we are now experiencing a pleasant change in the weather, the season is too far advanced to expect a long continuance of balmy days and the absence of frost at night; therefore it is well to be on the alert, having spare lights or other protecting material ready for placing over tender crops, such as French Beans, Vegetable Marrows, and even Cucumbers growing in frames. Late sowings of French Beans will pay well for having a frame placed over them, as with this protection they will afford valuable gatherings for weeks to come and thus save to a great extent forcing them in houses for some time at least. On the approach of frost, good gatherings of these as well as Runner Beans should be made before they are injured, and if spread thinly in a cool, dry place will last in good condition for several days. Although the heavy rains of late have proved beneficial to most established crops the surface soil has run together, especially on sowing beds, and such as Onions, Lettuce, Spinach, Turnips, and the like, will be greatly assisted by having the Dutch hoe used between the rows, which will not only destroy small weeds, but the growth will be accelerated by loosening the surface. Most autumn sowings have come up well, but should there be any blanks in the rows of Tripoli Onions these should be filled up by lifting the plants carefully with a pointed stick when they have come up thickly. A showery day is best for doing the work, and the plants should not be buried too deeply.

WINTER SALADS.—It is not wise to wait until we get frost before half-grown Lettuce and Endive are lifted and transplanted into pits and frames. Such work can be done more satisfactorily when the ground is not too wet, and it also allows time for plants to make some roots while the weather is favourable. The plants do not keep well when crowded together, as a spell of wet or severe weather causes many of them to decay. Each plant should be lifted with a good ball and carefully planted with a trowel, allowing 1 inch or 2 inches space between each so that light and air can reach the soil. One watering may be necessary to settle the soil round the roots, but, if planted early the lights may be drawn off during showery weather, which gives the plants a start. As good salad is generally scarce during spring it is always worth the trouble and seed to make another sowing in a warm corner or frame at the present time, as the seedlings will form nice little plants, and when they stand through the winter they turn in more quickly and with far less trouble than sowing early in spring in heat. The Year Round and Lee's Immense are the most suitable varieties, as they are very hardy. Endive is not appreciated in the salad unless it is well blanched. The Moss Curled is very popular, it becomes beautifully white and is less coarse in texture than the Broad-leaved Batavian, though

quires more protection during hard weather. There are various ways of blanching Endive, some place a tile or slate over each plant, which is removed when there is an absence of frost. In small flower-pots are also used successfully so that light does not reach the plants, which is effected by putting pieces of slate over the drainage hole, but as it is desirable to keep the plants at an even temperature, a good thickness of litter should be spread over the pots, which assists in obscuring light, prevent the sun from acting unduly upon them, and at the same time ward off frosts. Mustard and Cress are always sown, and as they are grown so easily, a sowing once or twice a week, according to requirements, should be made during the winter. It will be too late to grow this in cold frames, as it comes off quickly in a low temperature, therefore shallow boxes filled with rich soil should be used, and these stood in gentle heat. Fresh soil should be added at each sowing or the results will not be satisfactory.

**WATER-CRESS.**—This is appreciated on most tables, while it is often required in the kitchen for garnishing, &c. I have also known gardens where a daily supply had to be maintained, and were the methods employed to have it in good condition throughout the winter. Here the means of obtaining it is by making frequent plantations at the base of a back wall in the fruit houses. Cuttings are dibbled into sandy soil about an inch apart and given abundance of water. Grown thus, the foliage is delicate in colour and flavour, and being tender is more appreciated than that found in watercourses, and it can also be produced when none is to be found in the open.

**CELIFLOWERS.**—Plants from seed sown during August of Waleheren will now be ready for pricking off into their winter quarters. Nine plants are generally set out under a handlight, and in the corner the four corner and centre plants are retained and the other four transplanted. A border should be selected where the ground is rich. Mark off the stations where the handlights will be placed in lines so that there will be not less than 2 feet of space between them. In planting, lower the roots so that most of the stems are buried, water the plants in and give the surface soil between them a dusting of soot or lime to keep off slugs. Where handlights are not available, a shallow frame must be used to winter the plants in. It is not necessary to place this on a bed of manure, it being better to stand the plants on a hard surface in a sunny position and about 6 inches of good soil; make this surface firm, then prick the plants out about 12 inches apart. I am not in favour of very close plants for this purpose, as they become crowded before spring, and they do not prove so satisfactory as dwarf sturdy ones. It is not too late now to make another sowing if one light of a frame can be spared. This should produce nice plants by the end of October. These, if carefully ventilated during the winter, will make a fine succession, and may be put out in March. Vandy's Autumn Giant will now be plentiful, and will keep up a supply until the early Broccoli is ready. The plantation should be looked over and the heads cut before they become too large. It is a good plan to bend some of the leaves well over the heads while in a young state as this preserves the colour and also protects them from frost. If it is found that they are coming on too rapidly a slight check can be given by heeling them over, heads facing north, and the number may be dug up and stored in a cool place.

**CABBAGE BEDS.**—One is tempted sometimes to destroy these as being unsightly, which is a great mistake, as they may be made to supply a valuable lot of sprouts most of the winter. In showery weather of late has just suited them, and if the decayed foliage is removed, and the ground between them hoed, they will soon be furnished with young heads. Having stood so long, the plants are naturally somewhat exhausted, and the produce will not be so tempting as

that produced on younger plants. This, however, can be met by feeding the plants, and nothing suits them better than a good soaking of farmyard liquid. If this is not obtainable, a dressing of nitrate of soda or sulphate of ammonia will prove valuable. This, if hoed into the surface, will be washed down to the roots by the first rain, and a prolonged supply of a most valuable vegetable will be the result. RICHARD PARKER.

FRUIT HOUSES.

**PEACH HOUSES.**—The trees in the early houses will be fast shedding their leaves, and although they should not be forced from the trees, no harm will be done by smartly tapping the trellis two or three times a day, which will dislodge all that are ripe and ready to drop. Beyond this, all other means should be discontinued, and the leaves should be left to mature and drop naturally. After the leaves are all off, the trees should be pruned and detached from the trellis to undergo whatever cleansing they may require. After this fill up any gaps by lifting, if possible, suitable trees from the outdoor walls, and, if the matter has not already had attention, lift and lay out afresh the roots of those trees demanding attention in this direction. If the house stands in need of repairs or requires to be painted, this had best be done before attempting to top-dress the borders, and to prevent the borders being trodden into a solid mass place boards on the surface for the workmen to walk upon. In successional houses proceed with root-lifting, making additions to borders, top-dressing, and planting fresh trees to make good deficiencies caused either by death or the removal of unsuitable varieties. Trees grown outdoors are the best for this purpose, as they give by far the best results, while time is saved when looking at the matter from a cropping point of view. Where much Peach-forcing is carried on it is an excellent plan to grow a reserve stock of trees outdoors against a wall, so that a full-sized tree is always ready to hand when a gap occurs in the houses. For this purpose I prefer to plant maidens, and if these are well looked after and properly trained, a fine lot of trees can be obtained in from three to four years from the time of planting. The initial outlay is small, and when compared with the expense incurred in the buying of a good-sized tree for making good a gap with there is a great saving. If but ordinary-sized trees are purchased, a season or two is lost before they commence to make adequate returns in the shape of a crop of fruit, whereas a full-sized home-grown tree will give a full crop of fruit the first year if carefully lifted and properly planted. This is also a good way of furnishing the trellises quickly in newly-erected houses, as a good crop of fruit results the first season. When a new house or several houses are to be erected, provision should be made the previous autumn for growing the trees at home, if only for one season, and if the houses and borders are ready, they can be lifted and planted early the following autumn. In this case three or four-year-old trees should be selected, and, in addition to planting them in heavy calcareous loam, which will adhere well to the roots at lifting time, pay them every attention during the growing season in the way of keeping the young wood thinly trained out and the foliage clean and clear of insects. In late houses cut away all the useless wood from the trees as they become cleared of fruit, and give them, if they need it, a good hosing or a wash with the garden engine. Any lifting or root-lifting may then be done, also renovating and top-dressing of borders. Keep the houses cool and well ventilated if the wood is ripening up well; if not, a little fire-heat by day will be a great help in conjunction with a free circulation of air. See that the borders are kept uniformly moist, and if the trees are in the habit of bearing full crops of fruit annually, diluted farmyard liquid or diluted sewage may be given with beneficial results each time water is required. The remainder of the pot trees should be attended to as soon as the fruits are gathered,

and should the unfavourable weather continue, keep them under cover until their leaves fall and afford them an abundance of air.

**EARLY VINERY.**—The leaves being off the Vines, they may be pruned forthwith, after which they should have a thorough cleaning. The loose bark may be removed, but nothing more than this unless that worst of all VINE pests has gained a footing—the mealy bug. A thorough search must then be made for these insects both on the rods and spurs. They are more likely to be found in greater numbers on the latter, therefore particular attention should be paid to the spurs on infested Vines. After clearing away all loose bark, thoroughly scrub the Vine with a warm solution of Killbright, mixed at the rate of 2 ozs. to a gallon of warm water, and work it well into every twist and crevice both on rods and spurs. When dry, paint them with a composition made of soft soap, clay, soot, and sulphur in equal parts. Mix the ingredients together with warm water until they assume the consistency of paint, and apply with a sash tool. The old mulch and all loose particles of soil on the surface of the border should be cleared off, whether bug is present or not, and after the house has been cleaned and painted, if found necessary, pick off with a fork as much of the surface soil as can be done with safety and then top-dress. Use good fibrous loam, with wood ashes, bone-meal, and a little lime rubble added, and make all firm by treading and beating it down with the back of a five-tined fork. On very heavy soils a little sand spread over the roots before applying the top-dressing works wonders by inducing them to send out a regular network of new roots into the sand, after which they quickly avail themselves of the fresh rich compost placed immediately above it. Should the weather continue wet, the border, if outside, had better be covered, as the continual rains will have the effect not only of saturating the soil, but will also lower the temperature of the same considerably. If fine weather should again set in, leave the border uncovered in order that the sun may again warm the surface. Indoor borders, after being top-dressed, should be mulched with horse droppings, and if there is much traffic over them, place boards for the attendants to walk upon, to save the surface being trodden into an impervious mass, through which water cannot percolate properly when the time again arrives to commence watering.

**BORDER-MAKING.**—The rainy weather has caused a suspension of this operation, but it should be resumed again the first favourable opportunity with a view to bring it to a speedy completion, as this kind of work is always best done in autumn when circumstances will allow. Lifting where the roots have got into a bad state, with the consequent making of new or partly new borders, also adding to existing borders, also come under the same heading, and the sooner they are done so much the better. The soil when thrown together in the border starts fermenting to a certain extent, and the slight heat generated gives the roots a quick start. Proceed with the top-dressing of older borders after removing as much of the old, inert soil as is consistent with safety, and make good all defects in turf walls at the outer edges of the borders when such are used in lieu of retaining walls of brick.

**PIXES.**—A final potting up of suckers should take place, the number varying according to the stock at command, also future requirements. If a good stock is potted up now there will be no further need for putting more in until the spring-time. The finding of room for plunging these will necessitate a rearrangement of the pit or house in which they are to be grown, and advantage should be taken of this to give all present inmates that are still in 4-inch and 5-inch pots a shift into pots two and three sizes larger. They will then take no harm until the time for spring potting arrives, when they will require the final shift. The plants in succession pits or houses intended for starting early in the year should be got to rest at the end of the present month or not

later than the beginning of the next. The batch that will succeed these should also be treated in like manner, allowing a further period of two or three weeks before growth finally ceases for the season. All shading can now be dispensed with. In the fruiting house a warm atmosphere will be necessary for the proper ripening of all fruits. Smooth Cayenne and other winter-fruiting kinds swelling their fruits must have liberal treatment both in the way of feeding at the roots and in the maintenance of a nice humid growing atmosphere, and to this end take every advantage of sun-heat. A. W.

## ORCHARD AND FRUIT GARDEN.

### STEWING PEARS.

STEWING Pears are not so much cultivated as they deserve. They keep without difficulty well into the spring, and are not fastidious as to storage, whilst there is a great scarcity of fruit from February to May for cooking, a time when these Pears are acceptable. In my earlier days there was no difficulty in finding a ready sale for the best fruits, and the smaller ones were kept for home consumption. The variety mostly grown was the

**BLACK WORCESTER.** I have seen it stated that this variety is inferior to Catillac, but I have not found it so—at least, in the fruit gardens and orchards in Worcestershire and Herefordshire it is much esteemed for its good keeping and cooking qualities; indeed, this fruit is represented on the City coat-of-arms, so that it must be of ancient origin. The fruits were cooked as follows: A quantity of fruit was peeled, cut in half, and put into large jars and baked in the oven. When cold they were delicious, no colouring matter being necessary. Pear pies were also a great feature. Black Worcester is also grown under the name of Vernlam. I have never grown a better fruiting kind, as it rarely fails to give a heavy crop. I now come to a kind in favour in most gardens—namely,

**VEDALE'S ST. GERMAIN.**—I have the Worcester and this on an east wall some 15 feet high, and the crops are always fine. The Uvedale is a larger fruit than the Worcester and a grand keeper, but with me a shy cropper. It is in season at much the same time as the Worcester, and is a very large, firm fruit, of good quality when cooked, and may be termed a perfect stewing variety.

**CATILLAC** (see illustration) is also another Pear of great merit, and being a large fruit well repays growing on a wall. A wall, however, is not necessary, as when grown in bush form or in a dwarf state it gives a good return, and is a late fruit, keeping good well into the spring. It bears well when young. There is a much wider selection of earlier fruits or those in use from October to Christmas. Many of the third-rate dessert kinds are only fit for stewing, but they lack the quality of these later kinds, and are

more difficult to get of a good colour when cooked. For early use

**GROSSE CALEBASSE** is a valuable stewing variety, that sells readily in the market if gathered before it is ripe. It does well in bush or standard form.

**GILOGIL** is much grown on the Continent. This, I think, is the best stewing Pear grown, the colour and flavour when cooked being first-rate.

**VICAR OF WINKFIELD** is also a good, sound, winter fruit, very large and of splendid quality when cooked. For pies this variety is superior to many, and makes a nice change when well served; besides, it is a heavy cropper, and a very fine fruit when grown on a wall and grafted on the Quince stock. The little-known

**DIRECTEUR ALPHAND** is a valuable baking Pear, but with me it is neither so free as those named nor so large.

**BEURRE CLAIRGEAU** well repays for growing in quantity and is a sure cropper. It is a good baking Pear for early use and always saleable, being in season from October to January.



*Fruiting branch of stewing Pear Catillac.*

The above varieties may be planted with no fear of failure, and are far more profitable than many of the very small inferior dessert kinds.

W. S.

**PEAR MARGUERITE MARILLAT.**—The above variety was figured in these pages last year and a brief account of it given. The fruit is so handsome that it is well worth adding to Pear collections in favourable localities. In size it is not unlike a well-grown Pitmaston, but the colour is different. With me it more nearly resembles a well-finished Louise Bonne of Jersey, the spots being bright, the skin a rich golden-yellow flushed with red, the flesh sugary with a rich aromatic flavour. It is a grand addition to our early September Pears. With me cordon trees only planted last year have borne splendid fruits. It appears to be a free grower on the Quince stock, and if it does well in bush form it will prove a valuable intro-

duction. It is of continental origin. I saw great specimens of this variety fruiting in pots a determined to give it a trial. This autumn hope to plant some trees in bush form, as it is a splendid variety to follow Williams' Bon Chrétien.—G. WYTHES.

**PEAR JERSEY GRATIOLI.**—Many growers do not place the above Pear in the front rank of flavour, but with me it is so good and free from grittiness, which is not always the case, that in light poor soil I think it one of the most reliable of our early autumn Pears. It always bears a fair crop even in adverse seasons, and the fruit matures quickly after gathering. They are about medium size, melting and very sweet. It has greenish-yellow, richly-flavoured flesh, the skin rough russet. I prefer this variety grown in bush form. Grown thus the fruits are superior in flavour and less gritty. On walls they do not come larger. It bears freely in the open on Quince stock, while on the Pear it grows freely and is not so well flavoured. I have seen this variety good grown as a standard in favour

able localities. In many catalogues its season is given as October, but with me it is ripe in September 11). In heavier soils it is late. S. H. M.

**FEEDING RASPBERRIES.**—These plants suffer much during June and July from drought, but made but slow progress during August, but they are making up for lost time and grow freely, especially where the canes which fruit have been cleared away as soon as the fruit is gathered. Now is a good time to arrest the growth, at the same time restricting the shoots to a limited number, only leaving those intended for fruiting next year. Raspberries are often allowed to remain so long in one place, that feeding is necessary to get the best results. Many canes take liberal manure at this date and the plants will take liberal supplies. Failing this, a good manure of stable manure will do good in pushing the new wood, as with cooler weather the plants will grow freely for some time. I have seen

that excess of food now, means a soft, pithy growth, but if the canes are well thinned out I never saw late growths injured. There is ample time to finish such canes, as I find the more vigorous the canes the heavier the crop next season.—S. H.

**Peach Violette Hative.**—As a good all-round variety for general use this should be freely planted. In the south of England in warm aspects it is ripe the second week in September, but here is not fit until the end of the month from outside. In an unheated house it is just ready. The tree is hardy and fairly vigorous, and the fruit always sets freely either outside or under glass. It is not one of the largest, but quite big enough, takes on a fine dark red colour on the sunny side, and the quality is excellent.—R., *Suffolk*.

**PEACHES AND NECTARINES ON OPEN WALLS.**

THERE are many varieties of these that do not succeed well on open walls in this district. They live for a few years and then die off altogether. The springs have much to do with this, for the sap is excited early in the season by the genial weather we often get in February and growth commences. Sharp frosts and cold winds follow, so that in a short time the young foliage is covered with blister. In some seasons this is much worse than others, though it is seldom we are free from it altogether. Some varieties are also much more subject to blister than others, but none are altogether free. The best are Early Rivers, Alexander, Royal George, Early Silver, Sea Eagle and Prince of Wales; while Nectarines Darwin, Pitmasnan Orange, Spenser, Prince of Wales, Victoria, Pine-apple, and several others suffer severely. There is always some difficulty in getting the wood to ripen thoroughly on cold heavy soils and in exposed situations, as growth is so late before being arrested, and when the trees are badly blistered it is often the end of the summer before they recover from the serious check received earlier in the season. When the summers are cold and wet, like that of last year, there is little wonder at the wood not ripening in such places, but this has nothing to do with blister, for trees that are healthy and bloom freely are frequently cracked in cold springs. Blister, however, is not the only enemy the gardener has to contend with, for often mildew makes its appearance, and this is almost as serious as the other. There is, however, more chance of coping with mildew than with blister, for so long as the cold winds prevail blister will continue, while sulphur remedies applied in time, will keep mildew in check. To show that cold winds are responsible for blister, if the same varieties be planted in a cold house and on a south wall close together, we will find that while those on the outside are wholly infested, the others will be quite free. In some gardens that are sheltered blister seldom makes its appearance, while in others that are not far distant, though more exposed, the trees are nearly killed. I have often noticed that young trees in a nursery are seldom cracked by blister. How is this? In the first place, such are usually pruned back and made to break from lower eyes, the consequence being they do not push so early in the season; then again, it is seldom they have the protection of walls to hasten the flow of sap in spring. Peaches, Nectarines and Apricots are far more difficult to grow in the south than in the Midlands and further north, and many are puzzled to understand how this is. The only explanation I can give is the one before mentioned, as on gravelly soil, chalk and stiff loam

the trees die off alike. Neither lifting, close summer pruning nor early pinching seems to save them. I have frequently seen the trees killed by the cold when the Apricots have been the size of Peas. Many advocate wiring the walls that a current of air may pass between them and the trees; others recommend leaving the trees away from the walls as long as possible in spring; but neither of these plans has the desired effect, though the last is beneficial in some seasons when we have no late, severe spring frosts. Wired walls have their disadvantages as well as their advantages, particularly if the wires are too far away, for then the walls are not of that service in protecting the flowers or maturing the wood as they are when the shoots are close to them. Before glass was so cheap good stone fruit was grown on walls—in fact, from accounts, far better than at the present time; then there was not so much extra work in summer to prevent proper attention being paid to the training of the trees. In those days young men took their turns on the walls; now all is changed. The rage for cut flowers necessitates far more labour in the glass department, even though there is no more glass. I am not complaining of this, for it shows what progress has been made in the cultivation of flowers during the last generation; but what in many places is most annoying is that so much is required from the limited means at disposal, and where so much time has to be spent on cultivating plants, trees on walls get neglected. It is not that seasons have so much changed, or that gardeners are not so well versed in the management of hardy fruits now as formerly, but, owing to the multifarious duties they have to perform, something must get neglected. If Peach trees could be protected from the cold winds in spring and the shoots regulated and nailed in during the summer, the foliage kept free from insects and other pests, and watering and syringing attended to, there is little doubt, with the improved varieties, that as good Peaches could be grown now on the open walls as in years gone by. Cheap glass, however, has altered our gardens, and those who in former days were content with a vinery or greenhouse have whole ranges of glass for different plants, amongst which are Peach houses to produce early fruit. All this has a tendency to cause trees on the walls to be neglected, as the finest flavoured late varieties may be had in midseason, but if late fruits are to be had, it is still necessary to pay special attention to trees on the open walls, for though Princess of Wales, Sea Eagle, and some other highly-flavoured varieties are excellent in cold houses, the fruit will not hang till October, when it is often appreciated, so that trees on the open walls are necessary to prolong the supply. Disbudding is one of those operations that get neglected; the young shoots are so crowded together that they lose some of their lower leaves, and when thinned out, many of those left make laterals, and as these are not checked in time, they spoil the chances of a crop the next season, for instead of the growths being studded with flower-buds they are nothing but bare shoots. The aim should be to disbud as early as possible and protect the trees from cold winds, to encourage growth by keeping the foliage clean, to lay in no more wood than is required for the next season, to remove any laterals as they appear, and during the summer to keep the shoots fastened to the walls that the wood may be thoroughly ripened. All this requires time, and where so much extra work has to be attended to it is often difficult to do things just when they need it; hence the reason that Peach trees in many places do not thrive so

satisfactorily as one would wish. Protection in spring is often out of the question, and when only half done it is as well left alone. Blister, aphids, and mildew follow, the trees fail to grow satisfactorily, and in time die off. Gardeners are not to blame for this, for where there is not sufficient labour the most pressing work must receive attention first. Peach cases were recommended, but in many instances they were worse than useless, for the tops were fixtures, and, where the foliage got near the glass, red spider and thrips soon made their appearance, so that the remedy was as bad as the disease. In many places water is so scarce and time is required for other things, that syringing is impossible. In many of the new gardens coping the walls properly has been neglected, and as the water runs down them the mortar soon perishes. A good stone coping that projects at least 4 inches on either side is the best possible kind. As the most frequent rains are from a southerly direction, the slope should be made on that side, that the trees may have the benefit of the water from the coping; by this means fruit hanging on the opposite side of the wall will be kept dry, for late Plums and Cherries are frequently grown on the opposite side of the wall from that on which Peaches are. With due care and attention good fruit may be grown in the open, but where labour is limited this is almost impossible. H. C. P.

*Busted Park, Uckfield.*

**Plum The Czar.**—This is not, I believe, usually classed as a dessert Plum, but in a season like the present, when Plums are scarce, it comes in very useful. I have been sending it to table since August 10, and it has been appreciated. Though smaller than Victoria, it is much superior in point of flavour, and it is equally hardy, constant in bearing and earlier. Three years ago I had occasion to move some trained cordon trees of it, and having no wall to put them on, cut away all the lateral shoots except a few at the top, and planted them in the open as standards. They have made capital heads and have fruited well this season and last. Although a good deal of rain fell after the fruits had finished swelling, I have not found one cracked.—R.

**Peaches at Blickling Hall.**—Fruit generally is well grown at Blickling, and during the first week in September I saw some remarkably fine samples of Sea Eagle and Princess of Wales Peaches. The former, Mr. Oclee considers should be fit for gathering not later than the last week in August. Fruit that ripens later is, as a rule, much inferior in flavour to August ripened fruit and lacks juice. It is doubtless one of the most prolific and profitable Peaches to grow for market, and fruits on the upper side of the trellis take on a very delicate and attractive colour. I have heard Princess of Wales spoken against as being second-rate in flavour, but Mr. Oclee thinks well of it in this respect. Desse Tardive, a fine showy late Peach, does exceptionally well on a back wall. This Peach is naturally a strong grower, and, if allowed a free root run, often refuses to bear in a young state, but the tree at Blickling is restricted in root space, which no doubt has much to do with its fertility. For a late Peach the flavour of Desse Tardive is excellent.—J. C.

**Melon Gunton Orange.** A correspondent recently noted that he had not been successful in fruiting this delicious scarlet-fleshed Melon, and asked if any reader could help him in inducing it to fruit. My experience is that it does by far the best when its roots are somewhat confined. A shallow restricted border will do, but the best results are obtainable from pot culture. The growth is then tolerably firm, more bloom-producing laterals are formed, and most of the flowers set well if artificially fertilised. Fertilisation is important with Gunton Orange, and if this is neglected most of the blooms will fall. It, how-

ever, repays a little extra trouble, as it is without doubt one of the very best scarlet-fleshed Melons ever sent out. Unless a few fruits only are taken from each plant and much feeding resorted to, the fruits grow only to a medium size, just the size in fact for table, but they are very solid, deep-fleshed, and deliciously flavoured.—C. C. J.

**Late frame Melons.**—Not unfrequently where frame Melons are grown in quantity, cold, ungenial weather overtakes the latest crop when about half grown, with the result, unless remedial measures are taken, that the foliage turns yellow and the fruits never swell to their normal size or ripen properly. The old linings to the hotbeds on which the frames stand will most likely by this time be trodden down and incapable of supplying any warmth to the interior. These linings should be entirely removed, being replaced with others made of fresh material and built well up to the tops of the frame to allow for a slight settling. Further, the glass should be covered each night with mats, and a minimum amount only of air given, this being removed directly after dinner. Root moisture must henceforth be given on fine sunny days only and in a tepid state. Overhead syringings must be slight and given only in sunny weather, as wet foliage during the night is injurious so late in the season.—J. C.

**Grape Mrs. Pince.**—In spite of all the cultural notes that have been written on this Grape, perfectly coloured bunches are very seldom met with. This is a great pity, as without doubt the flavour of well-finished bunches is unsurpassed by that of any other black Grape. Mr. Oclec grows this Grape well at Blickling, and it may interest readers to know that he employs very little fire-heat as compared with most gardeners: in fact, early closing with plenty of sun-heat is his practice until the berries are somewhat advanced in colouring, from which date until colouring is complete a circulation of air is kept up day and night, the pipes being warmed in dull sunless weather. There is no doubt that many growers give this Grape too much fire-heat, which it resents, the berries often shrivelling by December. Rather narrow, shallow, sweet borders, rendered very porous by the addition of abundance of lime rubbish, are the root run of Mrs. Pince, and indeed of all the Grapes at Blickling. There is no fear of over-moistening such borders, and the roots being in a small compass are easily reached by manurial waterings.—J. CRAWFORD.

**Apple Worcester Pearmain.**—I have tried for many years to grow Worcester Pearmain as an espalier, but cannot get it to make any quantity of wood or to bear more than about half a dozen fruits in one season. It forms very few fruit-buds when spurred back, and what few fruits I have secured have been borne on the extremities of short growths about 6 inches long, which were let alone when the trees were summer pruned. This showy early Apple is often strongly recommended for market, but my experience is that, unless the soil is light and warm and the situation extra good, the trees generally make very poor headway and frequently collapse altogether from canker. I should not advise planting it except on a very limited scale in cold midland and northern districts. One sees very few Worcester Pearmain exposed for sale in midland markets.—C. H.

**Grafting old trees.**—The remarks by "A. D." (p. 195) are interesting and instructive. Years ago I assisted in a good deal of grafting in an Essex garden, and the plan advised by "A. D." of putting a few strong grafts into strong stems was generally followed. The trees were headed well back, the smaller side branchlets being entirely removed, and, as a rule, a stronger and larger tree resulted in a given time than when numerous small scions were inserted in many-forked branchlets. Several years ago Mr. Allan served an old unprofitable specimen in the pleasure grounds at Gunton in the same way, the sort employed being Blenheim Orange. This

year when I saw it the new portion was carrying a good quantity of nicely sized fruit. Grafting in this manner is just what is wanted with the Blenheim Orange, as when one plants trees of it there is no telling when they will fruit.—J.

**Apple Adams' Pearmain.**—This is one of the very best of the Pearmain section, but one seldom meets with it. Its season is from December to the end of February. The fruit is conical, the colour pale yellow, flushed and streaked with red on the exposed side. It does well trained in espalier form or as an upright cordon on a wall worked on the Paradise stock. It may be safely planted in standard form where the soil is fairly warm, but in cold, heavy loam it cankers. The flavour is brisk, juicy, and refreshing. Some of the finest fruits I have seen were growing on an upright cordon on a wall at Blickling Hall. Mr. Oclec is very fond of it and it never disappoints him in cropping.—J. C.

**Apple Cobbett's Fall.**—This Apple was, I believe, raised in Suffolk, and is a fine, juicy, well-flavoured cooking variety. It is sometimes catalogued as synonymous with Warner's King, but I believe it to be quite distinct and a better bearer. The fruit, moreover, on young trees fully exposed to the sun colours up much more highly than Warner's King, and, as a rule, is of better shape. I have it both in standard form and as an espalier, and this year the former is loaded with good normal-sized fruit, the espalier tree having a fair crop. Warner's King, even in our light soil, grows strongly and refuses to bear for some years even if root-pruned, while Cobbett's Fall generally yields in a year or two after planting, and makes only moderate wood. An old Suffolk gardener assured me that the two Apples were distinct.—C. N.

**Apple Tyler's Kernel.**—This fine cooking Apple was known to Herefordshire growers for many years before it received a certificate from the Royal Horticultural Society. With me it proves equally prolific grown as a bush as it is when grown as a standard, and such being the case, it is a great acquisition, as in form and keeping qualities it takes rank before many varieties, such as Lady Henniker for instance. What little falling off there may be in point of size is more than compensated for by the regular outline of the fruits of Tyler's Kernel, which means less waste when being prepared for use, and also by a considerable gain in weight. It is a fine market Apple, the fruits being clean looking, with a handsome tush on the sunny side, while they are large and conical in shape, and evenly formed. Its season is from October to the end of the year.—A. W.

**Open-air Vines.**—In spite of a wet and cold August, Grapes in the open are ripening nicely, especially the white variety Chasselas Vibert and the old Sweetwater, the latter being very good this season on an east wall. Chasselas Vibert is a very good Grape and well worth more notice, as it is very sweet, of fair size, berries round, and of a fine golden amber when ripe. So far it has never failed to produce a crop every season if the growths are kept stopped back to allow sun and light to reach the fruit. It is a strong grower, ripens ten days earlier than the Muscadine; flesh juicy, rich, and very refreshing. The black varieties with me are a little later, and I fear will crack badly if the autumn is not favourable. On a south wall Black Cluster and Miller's Burgundy do well. The Claret Vine (*Vitis purpurea*) and the Parsley-leaved are pretty for covering, and beautifully coloured in the autumn.—G. W. S.

**Pear Dr. Jules Guyot.**—I recently staged this Pear and was told I had two kinds—viz, Williams' Bon Chrétien and the newer variety. In appearance they are much alike, the quality varies on different aspects, but there is a distinct flavour to the one named above. It is a Williams' without the musky flavour. Another point one may distinguish Dr. Jules Guyot by is that the fruits are more tapering at the stalk end than Williams', but this is not always the case. Some growers class it equal in cropping with the older

kind. With me in cordon form it has never failed. My trees are on the Quince stock and make a fair growth. It is in season at much the same time as the Williams'. On a wall it is the earlier of the two, and being a handsome fruit it will become a favourite for market. I should class it as an August fruit, and in bush or pyramid form it will be worth room in most gardens where early Pears are needed.—G. WYTHES.

**Scarcity of Doyenne du Comice Pear.**—This is a bad Pear year; only a few kinds are bearing an average crop, and it is strange that some of the shy fruiterers this year are better than those which usually crop freely. I notice some of the newer varieties of Pears this season are bearing much better than one could expect, seeing there are so scanty crops on older kinds. Doyenne du Comice in this part is only a poor crop, and this is a misfortune. On two walls south and east, I have none, whilst on a north aspect I have only a very few fruits out of a good number of trees. The worst of trees on this aspect named is that the fruits lack the clean skin those on a more favourable position have. I think by growing Pears on different aspects there is a great gain in such seasons as the present. In my case bush and pyramid trees of this variety this year are barren, and these trees in my opinion give the best flavoured Pear. Cordons are somewhat better.—G. WYTHES.

**Flavour in Damsons.**—I do not know many growers of these useful fruits have noticed the difference in the flavour of the round and some of the larger fruits compared with that of the oval kinds. I have this season tried several kinds to test flavour, and I must give the first place to the long-fruited oval kinds, those known as the Cheshire Prune in the north and a similar variety as regards its rich, piquant flavour, the Shropshire Prune. These fruits are oval in shape and the growth is quite distinct from that of the larger kinds. These latter in some cases have small stone, and doubtless from a grower's point of view would be more saleable than the oval kinds. Preserve made of the Hereford Prune, I think, no equal. The trees have small leaf and make a slender growth in comparison with that of the larger kinds. It is to be hoped that our large fruit tree raisers will not omit these varieties from their lists in favour of newer larger kinds. I am aware in the counties named there is no fear of the stock being worked out, many cottagers grow them largely, but in gardens they are not so often seen.—S. B. M.

**Apricot trees.**—As there seems to be a thing new under the sun, I presume it would be regarded as absurd to ask whether anyone has ever tried the effect of budding or grafting standard varieties, and notably Moorpark, upon seedling Apricot stocks. No doubt some one has, and now, and it would be interesting to learn the result. That there can be very good Apricots raised from seed there can be no doubt, but the same very few care to take the trouble. It is a wonder that some enterprising nurseryman has not striven to produce good varieties in this way, but presumably it is regarded as too great a lottery. Only a few years ago there was a huge tree, reputed to have been 100 years old, in the garden of Malshanger Park, but it died at last from sheer old age. But two or three years since I saw growing on the old stone walls that surround a portion of the gardens at Farnham Castle two very old trees, or remains of old trees, that had strange stems, one having been some 12 inches more broad, yet almost flat, yet from such support there were numerous branches cropping w. annually. These trees were, doubtless, 150 years old. They had really no border, only 12 inches of soil, then 12 inches of turf edging, then gravel path 5 feet wide, then grass again. The longest-lived Apricot trees seem to be the having no borders, but a gravel path or road over the roots.—A. D.

**Pear Marie Louise d'Uccle.**—Although, "C. C. H." remarks on p. 194, the title of improved Marie Louise is not by any means approp-

ble to this Pear, it may with advantage be grown or prolonging the season of the type. According to my experience it is harder than Marie Louise and a more certain cropper, and though the flavour is not so good, yet it is by no means to be despised, especially when fruit is scarce. I much regretted having to cut down an old tree here against the house, the station being required for vegetables. This bore freely every year, and the other day I saw a fine young tree at Melford Hall growing on a south-west aspect and loaded with fruits with the characteristic russet skin. On heavy soils the tree should be planted very shallow and well mulched, the production of plenty of young roots near the surface being of great importance. Here they have the advantage of air and sun, and the difference between the fruit from young trees so treated and that from old ones the roots of which have got down to an unsuitable soil is very marked. Most soils are warm enough and good enough to grow good fruit if the roots are running in a firm but well-ventilated surface medium, but on a cold, hungry soil it is quite different, this causing cankered trees and cracked, undersized fruit.—R.

I am pleased to see "C. C. H.'s" note (194) on the above, as I think its qualities much over-rated in fruit catalogues. In some lists—my own included—it is not worth much notice. Mr. Barron, in his useful report on Pears, No. 85, gives a very good account of its quality, having pasty flesh and inferior in quality, though a great cropper." Doubtless this last quality may make it valuable to many, but a poor pear is not worth room in any garden. For market it is often recommended, but buyers are beginning to know the qualities of a few kinds, and for flavoured ones will not command so good a price. When placed by the side of the older Marie Louise it is not worth eating, as "C. C. H." remarks. The tree is a vigorous grower, and on the east coast I have seen some remarkably fine trees on cordon trees. Doubtless soils may influence flavour, but so far I have never tasted a really good fruit of this variety. For exhibition it is a favourite on account of its size. The question of size is too favourably considered in the exhibitions. Another fine Pear much over-rated is Beurré Bachelier. This with me is anything but first-class, though a certain cropper.—S. H. B.

There is certainly a hope that florists will amend their ways and lean more to the informal and natural in the future. For notes on the various exhibits reference must be made to the detailed report which follows. There was also an admirable exhibit of autumnal Roses from the well-known Waltham Cross firm. This in itself was worth a journey to see as a lesson of what to plant for a late display. Hardly harder flowers too were shown in goodly numbers, notably Michaelmas Daisies and various allies of the Sunflower family. A few good and well-known plants, flowering and otherwise, were also staged. These added to the attractiveness of the meeting. The best of these were *Salvia splendens grandiflora* and the early-flowering *Chrysanthemums*. Orchids were not numerous, but those shown were of excellent quality, *Vanda cœrulea* standing out conspicuous. Fruit was not numerous on the whole. The competition for the flavour prizes was distinctly good, but no new variety of either the Apple or the Pear supplanted the older kinds.

**Orchid Committee.**

A first-class certificate was awarded to

*LELIA PRÆSTANS* (Gatton Park variety).—This is very much in the way of a variety previously certificated as *L. Dayana delicata*. The nearly white sepals and petals are slightly suffused with mauve. The front lobe of the lip has a deep blue tint instead of the usual red, the side lobes similar to the petals, shading to yellow at the base. The plant carried four flowers and buds. From Mr. J. Colman, Reigate.

Awards of merit were given to the following:—

*CATLEYA HARDYANA LOWLE*.—One of the finest forms of this lovely natural hybrid we have seen. The sepals and petals are deep rose mottled with white in the centre, the lip deep crimson-purple margined with rose, veined in the centre with white, and having very prominent yellow blotches in front of the throat. The sides lobes are rich purple, longitudinally lined with rich golden-yellow. The plant carried a raceme of four flowers. From Messrs. H. Low and Co., Clapton.

*VANDA AMGENA*.—A distinct and lovely addition to this family. It is supposed to be a natural hybrid between *V. Roxburghi* and *V. cœrulea*. The ground colour of the sepals and petals is of a silvery-grey, thickly covered with small blue-tinted spots, the lip bright blue thickly lined and spotted with a darker shade of blue; the side lobes nearly white, thickly covered with deep blue spots. The column is white with numerous dark blue spots. The plant bore a raceme of three flowers. From MM. Linden, Brussels.

*MILTONIA PEETERSIANA*.—Supposed to be a cross between *M. Moreliana* and *M. Regnelli*. The sepals and petals are similar in colour to those of *M. Moreliana*. The lip is light rose in front, veined with a darker shade; it has the rich purple disc and crest as seen in *M. Regnelli*. From Mr. R. J. Measures.

*LYCASTE DENNINGSIANA*.—A distinct variety; sepals and petals each about 3 inches in length, pale greenish white, the lip about 1½ inches in length, of a deep orange-red shade. From Mr. F. W. Moore, Royal Botanic Gardens, Glasnevin.

*ONCIDIUM PAPILIO*.—A good form of this well-known species of the Butterfly Orchid, which had not previously been certificated. The sepals, petals, and lip are bright yellow, with prominent bright brown markings. From Mr. D. M. Grimdsdale, Kent Lodge, Uxbridge.

Messrs. Hugh Low and Co., Clapton, sent a large and interesting group, prominent in this being some remarkably fine forms of *Vanda cœrulea*, several finely-flowered plants of *Cypripedium Charlesworthi*, and a dark form with three flowers of *C. Alfred Hollington*. *C. orphanum* and *C. Arthurianum* were also well represented. Amongst the *Odontoglossums* were good forms of *O. crispum*, *O. seeptrum*, and *O. triumphans*. *O. grande* and *O. Harryanum* were also conspicuous. A distinct form of *Dendrobium Lœanum*, the sepals and petals bright rose-pink, shading

to white at the base, the lip deeper purple in front, shading to a light shade of rose in the throat, was also shown. Prominent amongst the *Cattleyas* was a good bright form of *C. Ludemanniana* with two flowers. Several dark forms of *C. Harrisonæ*, *C. Gaskelliana delicatissima*, sepals and petals pure white, lip white, with a delicate rose blotch in the centre shading to bright yellow in the throat, *Lælio-Cattleya Aurora* with two flowers and its near ally *L.-C. Novelty* were also noteworthy. A silver Flora medal was awarded. Messrs. F. Sander and Co., St. Albans, sent a small group, in the centre of which was a large plant of *Odontoglossum grande* with eight spikes of flower. *Dendrobium Farmeri*, *Lælia Dayana* with ten flowers, *Lælio-Cattleya Vedasti*, in the way of *L.-C. Aurora*, a dark form of *Miltonia Moreliana*, *M. Lubbersiana*, *M. Lamarekiana*, a natural hybrid between *M. Clowesi* and *M. candida*, a grand flower of *Cypripedium bellatulum album* and *C. H. Ballantine* were also included. *Dendrobium Gratrixianum*, shown for the first time, is a distinct species with pure white sepals, the petals white with rose tip, the lip white with a slight tip of rose in front, having a distinct rose-purple disc at the base. Messrs. Collins and Collins, Willesden, sent *Odontoglossum Pescatorei* in variety and a form of *Odontoglossum excellens*.

Mr. W. S. McMillan sent a plant of the lovely *Cattleya Dowiana aurea* Mrs. F. Hardy var. that had previously been certificated; the sepals white, petals white, with a slight trace of pink at the apex, the lip having the deep crimson and yellow markings characteristic of the species. Mr. Grimdsdale sent a finely flowered plant of *Cattleya Harrisonæ*, and Sir F. Wigan sent a cut spike of *Houlletia Brocklehurstiana* with six expanded flowers.

**Floral Committee.**

First-class certificates were given to the following:—

*RETINOSPORA OBTUSA SULPHUREA*.—A distinct form of the type and of elegant and free growth. A pale green pervades the older portions, whilst the young shoots are tipped with sulphur-yellow throughout. From Messrs. J. Veitch and Sons, Chelsea.

*AFERA ARUNDINACEA*.—A remarkably distinct grass. The leaf growth is erect, about 2 feet or so in height, the leaf being of a pale green, whilst the stems are of a pale golden shade, the growth from the base being dense. Its attractiveness, however, centres in the drooping, extremely light and graceful plumes of quite 4 feet in length, these arching over and extending far below the soil line and quite self-supporting. From Messrs. J. Veitch and Sons.

Awards of merit were voted to the following plants:—

*CHRYSANTHEMUM MYTCHETT WHITE* (Japanese, early flowering).—A pure white variety, of good form and of medium size. It partakes of the reflexed character in the petals, which are of medium width also and fluted at the base. It is a distinctly useful variety and one to which three marks were accorded at the last meeting of the committee at Chiswick. From Mr. M. Russell, Mytchett, Farnborough.

*PRIMULA OBONICA FIMBRILATA*.—A very distinct form of this Primrose with larger flowers than in the type, and which in addition are prettily fringed. A rosy tint pervades the flowers, whilst the eye, which is of a greenish yellow, is considerably enlarged. The growth resembles that of the type, but the flowers lean towards the Chinese varieties. Mr. T. Lowton, Faversham.

*PHLOX MISS PEMBERTON*.—A variety of decided merit, with flowers of unusual size and good also in the truss, the colour a combination of shades of salmon and rose. Messrs. Paul and Son, Chess-hunt.

*CRASSULA COOPERI*.—An extremely dwarf species, of dense habit and growth, and completely covered with minute blossoms of a vinous crimson, the leaves quite fleshy. A useful plant for dwarf edgings and rockwork, but not hardy during the

**SOCIETIES AND EXHIBITIONS.**

**ROYAL HORTICULTURAL SOCIETY.**

SEPTEMBER 21.

The decision of the council to hold two meetings in the present month has been amply justified, and it must be very satisfactory to the governing body to know that this, the second gathering in the month, has met with so much favour and support. It would hardly have been possible, were the society dependent upon competitive classes with substantial money prizes, to have drawn together a more or more representative exhibition of autumnal produce than that staged on the present occasion. Such an exhibition reflects the greatest credit both upon the trade and private growers, and from time to time, as occasion favours them, bring together their various exhibits for the education of those who attend these fortnightly meetings. It may be safely said that never was the Royal Horticultural Society more popular with its Fellows and supporters than it is at the present time. No better proof of this is needed than that afforded in the extensive displays from time to time at the Drill Hall.

Dahlias at this meeting were excellent, and never before has such a display of this popular autumnal flower been made in the Drill Hall. Most of these exhibits were put up by the trade, and it was gratifying to note that fresh object lessons in staging Dahlias were to be seen. It is a great relief to see that the old and antiquated method of staging is being broken away from.

winter outside. *C. Cooperi*, as described in "Dictionary of Gardening," has white flowers. From Messrs. Paul and Son.

**DRACENA (CORDYLINA) RUSSELLI.**—A narrow-leaved form of *D. australis* and of similar habit to *D. Doucetti*, to which it will in all probability be a fitting companion; the colour is of a clear coppery shade. From Mr. J. Russell, Richmond, Surrey.

**DAHLIA HARRINGER (show).**—This is a pale lilac-coloured variety of beautiful form, having a close, compact centre. From Mr. Harris, Orpington.

**DAHLIA GREEN'S GEM (Cactus).**—A very small flower of fairly good quality, but having a rather loose centre. The colour is a dull salmon. J. Green, Dereham.

**DAHLIA MURIEL HOBBS (show).**—A clear golden yellow of good form, the centre good, and slightly tinged with chocolate. Mr. Hobbs, Bristol.

**DAHLIA MINNIE RICHARDS (pompon).**—A pretty flush-white variety, but inclined to be coarse and to open in the centre. The shape is good and very even. Mr. T. S. Ware, Tottenham.

**DAHLIA NELLIE BROOMHEAD (pompon).**—A very good exhibition bloom of excellent form, with a perfect centre, very even in the petal, and of a very pleasing lilac colour. Mr. J. T. West, Brentwood.

**DAHLIA ISLAND QUEEN (Cactus).**—A very pretty and compact flower of good Cactus form, rosy lilac in colour. Mr. J. T. West, Brentwood.

**DAHLIA MARY SERVICE (Cactus).**—A bloom of perfect form, the petals finely pointed and twisted, the colour a dull bronzy pink, more curious than pleasing. Messrs. Keynes, Williams and Co., Salisbury.

**DAHLIA LAVERSTOCK BEAUTY (Cactus).**—Another flower of good form; petals much twisted, colour pinkish terra-cotta. Messrs. Keynes, Williams and Co., Salisbury.

**DAHLIA KEYNES' WHITE (Cactus).**—The purest white Cactus Dahlia yet raised, of good form and apparently very reliable. Messrs. Keynes, Williams and Co.

**DAHLIA ARACHNE (Cactus).**—A striking scarlet and white-striped flower of perfect Cactus form, but rather small. Messrs. Keynes, Williams and Co.

**DAHLIA MALUMA (pompon).**—A fairly good yellow, but inclined to have a weak centre. The colour is pleasing and the shape and the petals even. Mr. C. Turner, Slough.

**DAHLIA MISS FINCH (Cactus).**—A beautifully shaped variety with finely pointed petals and excellent centre, the colour a rich purplish crimson. Messrs. Cheal and Sons, Crawley.

**DAHLIA MRS. T. GODDARD (Cactus).**—A beautiful crimson, perfect in shape and petal, one of the best of this season. Messrs. Cheal and Sons, Crawley.

**DAHLIA SALMON QUEEN (Cactus).**—A very striking flower, of good size and form, but with a tendency to flatness in the centre petals. The colour is a deep apricot, shading to salmon in the outer petals. Messrs. J. Burrell and Co., Cambridge.

**DAHLIA CASILDA (Cactus).**—A fine primrose-yellow of good form. Messrs. J. Burrell and Co.

**DAHLIA FALKA (Cactus).**—A very good flower, narrow in the petal, and of a rich ruddy magenta colour. Messrs. Burrell and Co., Cambridge.

Dahlias were greatly in evidence at this meeting, and a very gorgeous show they made, a large number of really excellent flowers being staged. A silver-gilt Flora medal was awarded to Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, for a large exhibit of Cactus Dahlias, among which were good bunches of Mrs. F. Fell, Harmony, Fusilier, Lady Penzance, and Chas. Woodbridge. The blooms were throughout of fine form and size. Mr. West, Tower Hill, Brentwood, staged a collection of Dahlias, comprising Cactus, pompon, and show varieties. In the first-named section many of the blooms were inclined to be coarse, this being particularly the case with Harmony and Earl of Pembroke. The best bunches here were those of Island Queen, the charming new mauve-coloured variety. Among

the shows were Duchess of York, Arthur Rawlings, Maud Fellowes, Virginale, T. W. Girdlestone, and Nellie Crامond. The pompons included good bunches of Gipsy, Nellie Broomhead, Nerissa, Mary Kirk, and Madge. A silver Banksian medal was awarded. A similar exhibit, but smaller, came from Mr. G. Humphries, Kington Langley, and included some splendid show and fancy blooms, notably Duchess of Albany, Goldsmith, Mrs. Saunders, James Cocker, Ethel Britton, and Duchess of York (bronze Banksian medal). A few splendid Cactus Dahlias, chiefly new varieties, were shown by Messrs. Keynes, Williams and Co., Salisbury. The best were Mary Service, Firebrand, a new crimson of good form; Arachne, the new scarlet-and-white striped flower; and Keynes' White, the best white yet certificated. A very extensive exhibit of Cactus Dahlias and Gladioli came from Messrs. J. Burrell and Co., Cambridge. The best of the Dahlias were Regulus, Mrs. F. Fell, Beatrice, Cinderella, Fantasy, and Mrs. Kingsley Foster. The Gladioli were throughout magnificent, well flowered, and the blooms of great size. A few of the best were At's, Mikado, Rayon d'Or, Jeannette, Grand Rouge, Carmen, Enchantress, and Horace Vernet. A silver-gilt Flora medal was awarded. A particularly fine exhibit of Dahlias came from Messrs. Cheal and Sons, Crawley, every bunch being remarkably fresh and perfect in condition. The best of the pompons were Fabio, Whisper, Lillian, Nerissa, Sunny Daybreak, Emily Hopper, and Ganymede. The Cactus varieties were very beautiful and constituted the chief feature of the exhibit. The best were Cinderella, Mrs. Kingsley Foster, King of Siam, Starfish, Harry Stredwick, Harmony, Cycle, Chas. Woodbridge (a superb bunch), and Mrs. Beck. The singles included some very beautiful things, especially Naomi Tighe, Miss Zulema, Donna Casilda, Mrs. Wythes, Victoria, Little Nell, and Phyllis. A silver Flora medal was awarded. Mr. Chas. Turner, of Slough, had a pretty collection of Dahlias, the flowers being shown in baskets. The best varieties were Starfish, Mrs. Barnes, Countess of Gosford, Chas. Woodbridge, Mayor Haskins, Harmony, and Fusilier. The pompon Hypatia, a new variety of good form and unique colour, was also shown (silver Flora medal). Mr. G. Mortimer, Farnham, Surrey, also staged Dahlias—Cactus, pompon, show, and fancy varieties. In this case the shows and fancies were particularly good, notable kinds being Joseph B. Service, Duchess of York, Perfection, R. T. Rawlings, Diadem, Richard Dean, Majestic, Shirley Hibberd, James Cocker and James Stephens. A silver Flora medal was awarded. Messrs. Jones and Sons, Shrewsbury, had a large exhibit of Dahlias, comprising arrangements in baskets, vases, &c., and also bouquets. A few of the best things were a charming bouquet of Harmony, tastefully arranged with grass and tinted foliage, a graceful basket of small blooms of Fusilier, another of Fantasy, and a huge trophy of Mayor Haskins and Lady Penzance. The whole group was of high quality and well staged, and fully deserved the silver Flora medal. Mr. J. Hudson, of Gunnersbury House, Acton, exhibited a large and interesting collection of Cactus, single, pompon and single Cactus forms of Dahlias. The single Cactus varieties were in good form, especially interesting as being the only ones in the show. The collection gained a silver Flora medal. Messrs. H. Cannell and Sons, Swanley, Kent, also staged Cactus and pompon Dahlias in good style, gaining a silver Banksian medal.

A very excellent and striking exhibit was a large collection of Asters and Sunflowers from Messrs. Veitch and Sons, Chelsea. A great number of varieties of Asters was shown, some of the most beautiful being F. W. Burbidge, Apollo, Candidus, Shorti, Acris, Mrs. John Wood, and Aurora (silver Flora medal). A collection of very lovely varieties of early Chrysanthemums was shown by Mr. E. F. Such, Maidenhead, and gained a bronze Banksian medal. A few of the best things were Harvest Home, Dorcas, Blushing Bride, Miss M. Massey, and Bronze Bride. A

silver Flora medal was given to Mr. J. H. Withy for a good and tastefully arranged group of Chrysanthemums, including some very fine Japanese varieties. Very attractive was a collection of autumn Roses from Messrs. Wm. Paul and Son, Waltham Cross, which was awarded a silver-gilt Banksian medal. A few of the best things were a new Tea, Souvenir de C. Guillot, a good colour deep rosy apricot; Cameos, George Nabonnand Mme. Pierre Cochet, Marie van Houtte, Enchantress, and Queen Mab. A silver Banksian medal went to Messrs. John Laing and Sons for a group of very handsome stove plants, chiefly well-grown Dracenas and Crotons. A similar group from Messrs. Peed and Sons was awarded bronze Banksian medal.

Messrs. Paul and Son, Cheshunt, staged a remarkably fine group of hardy herbaceous flowers, containing Aster Novæ-Angliæ pulchellus (very dark form), Funkia subcordata grandiflora (some charming hardy Cyclamens, Sanguisorba canadensis, Crassula Cooperi (a rich crimson flower for carpet bedding), Colchicum speciosum and Rosa viridiflora (silver Banksian medal). A charming group of early white Chrysanthemum Lady Fitzwygram and Liliums came from Mr. C. Wythes, Syon House Gardens. A silver Flora medal was deservedly awarded. A collection of huge blooms of Japanese Chrysanthemums came from Mr. W. J. Godfrey, Exmouth, Devon, at contained a box of lovely flowers of W. R. Prince a large, handsome yellow. Messrs. Cutbush and Son showed branches of Phytolacca decandra heavily fruited. A brilliant patch of colour was formed by a group of the dazzling scarlet *Salvia splendens grandiflora*, shown by Mr. J. Hudson.

#### Fruit Committee.

There were fewer exhibits before this committee than might have been expected. Hardy fruit were not numerous, but the Apples and Peaches staged for flavour made a good display. Ten minutes of a committee meeting held at Chiswick on the 8th inst. were confirmed. Potatoes were dealt with, between seventy and eighty kinds being examined. Several were noted for their cropping qualities, but only a few stood the test of cooking. Tomatoes were gone through, but awards were given. It was decided to examine them later. Runner Beans were also examined. One variety was thought excellent for use as a haricot, but the others were passed over.

Awards of merit were given to:—

**POTATO IVO.**—This, obtained from the Canals Islands, is a white-fleshed kidney, a good cropper and of first class flavour. From Major Curtis.

**POTATO CARDINAL.**—A very heavy crop, white round, inclined to be somewhat pebble shaped. It is of excellent flavour, flesh firm and dry. It is a good late variety.

**POTATO HORSFORD'S SEEDLING.**—A very profuse, white, pebble-shaped variety, of fine quality and a heavy cropper. From Messrs. Horsford, New York.

**POTATO WINDSOR CASTLE** was given three medals thus confirming the previous award given. The variety proved to be one of the best for crop and quality. Messrs. Sutton & Sons.

Mr. Empson, gardener to Mrs. Wingfield, Amptill House, Beds, staged a large quantity of Onions, taking up much table space. There were some very fine specimens of Carter's Record, Excelsior, Ailsa Craig, Holborn, Banbury, Magnum Bonum, with smaller specimens of other varieties arranged in groups and large mounts (silver Knightian medal). Some twelve Melons, mostly large specimens, but varying much in shape and colour, were staged by Mr. W. Keble Barnes. The variety was said to be Earl of Favourite, but there were doubtless several varieties. Mr. Woodward, Barham Court Garden, Maidstone, showed a fine dish of Beurre de Melon tillet Pears, receiving a cultural award. A seedling Apple named Sweet William was shown by Mr. Williamson, Daisy Bank, Conington. A very fine bunch of Grapes, stated to be a seedling, and not unlike a Sweetwater, but

uch firmer berry, named Bloxham Seedling, me from Mr. Bloxham, Brickhill Manor, Beds. ew Melons were shown by Mr. Bishop in three varieties, but none were thought any improvement older kinds. A fine dish of the new Late Denian Peach was staged by Messrs. Veitch, Ltd., nelsen.

The Veitch prizes for flavour brought forth a rited competition, there being eleven varieties Apples, the first prize going to Mr. Wythes, on House, Brentford, for an excellent dish of bston Pippin, grown on a bush on a south rder, Mr. Coleman, Gatton Park, Reigate, ing second with Worcester Pearmain. Gravenin, Maltster and Ribston Pippin were the other nds staged. Pears were represented by eleven shes, the premier award going to Mr. Herrin, opmore, for Souvenir du Congres, a very fine sh. The second prize was taken by Mr. Wythes th excellent Autumn Nelis; smaller fruits than e first, but we think of better quality. The her varieties staged were Beurré d'Amanlis by er exhibitors, Williams' Bon Chrétien, Jersey atiali, Marie Louise, Louise Bonne of Jersey, nd Fondante d'Automne.

There was a very good attendance to hear Mr. guldens lecture on "Cyclamens." He treated e subject in a very practical manner. The lecter gave the flowering season as October to arch. Of late years there have been some grand ditions both in colour, shape, and size of lwers. Only in a limited number of gardens are cyclamens grown well, and this is to be regretted, few plants are more useful during the winter ouths. They require much attention to keep em clear of insect pests, and if at all neglected, e. Iggulden's advice was not to grow them, unless done well it was best to leave them me. Seed was often sown early in the year, but ere was not sufficient time for the plants to evelop. Autumn sowing was much better, d details were given as to sowing, also e importance of sowing new seed, the latter havg more vigour and germinating freely. Young plants must not be checked in any way from the rt, but be kept growing and perfectly clean. e temperature the lecturer recommended was em 60° to 70° for the seed. It should be sown i pans covered over with sheets of glass, and ed to prevent drying of the soil. As soon as re enough to handle, the seedlings should be eefully lifted out of the pans and potted up ip 2½-inch pots. Here more care was needed up was at times given, as if the tender rootlets a broken in the operation, the plants receive sh a check that they rarely grow out of it. er potting up, the plants are best stood on a eash bottom on a stage in low houses or pits, ding from sun. A small house is advised, as e more moisture is retained. At the second sit the compost should consist of two parts len, one of leaf soil and one of coarse sand, and h pots are best, firm potting and ample drainage being necessary. Place again in the shetures advised till the roots reach the sides of el pots, and take care to spray the plants overbd twice daily, morning and afternoon, well daping the foliage. In summer the plants are e grown in low cool frames on an ash ecom, housing in September not far from th glass. These plants are best grown in a ese by themselves. It is best to water at th side of the pots. During the flowering eod he advised a lower temperature—45° by nght and 50° by day. Another point he strongly emphasised was thoroughly ripening the crowns afr flowering, as by so doing better growth folld. Two-year-old plants he found flowered in h better than one-year-old ones. He briefly eferred to the great strides Cyclamens had made e years. Few plants had shown greater imement. We now had such good varieties that th only thing needed was care in culture. eeling and other points of culture were also gone

r. Iggulden, in reply to questions by Mrs. Douglas and Sydenham, stated that old

plants were superior to seedlings if they were well ripened previous to being repotted. He gave old plants a thorough soaking after drying off before repotting and carefully removed old soil, not breaking the roots in so doing. Mr. Sydenham stated that with improved fumigators there was less difficulty in culture. He also pointed out the value of Cyclamen flowers when cut.

**National Chrysanthemum Society.**—On Monday evening last the general committee of this society held a meeting at Anderton's Hotel, Fleet Street, Mr. T. W. Sanders presiding. The minutes and correspondence having been formally disposed of, the secretary read out a list of the society's medals awarded at the recent early-flowering show. The question as to time and place of the annual dinner occupied some attention, a small sub-committee being appointed to eury out the details. A financial statement up to the 11th inst. was presented by the secretary, which appeared to be satisfactory when compared with that for the same period last year. Several new members were elected and the North Canterbury (N.Z.) Chrysanthemum Club was admitted in affiliation. Mr. Gordon drew the attention of members interested in the early varieties to the collection at present growing in the Royal Horticultural Society's gardens at Chiswick, and thought it would well repay a visit by any of those who paid special regard to varieties of that type. Mr. Harman-Payne announced that the French National Chrysanthemum Society intended to hold a conference and show at Orleans next November, and would be glad to welcome a deputation from the English Society. If it were considered feasible to organise such a deputation he would be pleased to give every information as the time drew nearer to hand.

NOTES OF THE WEEK.

**Dahlia Miss Irene Cannell.**—This is perhaps one of the most beautiful of the Cactus forms of this flower, and likewise a most pleasing kind in the rather unusual apricot shade that renders it such a useful addition to this favourite class.

**Potentilla fruticosa.**—This shrubby species after flowering freely for a long season is still gay with many of its golden blossoms, and a worthy subject for the higher parts of the rock garden or the shrubbery. Its neat foliage, too, is by no means common.

**Aster Novæ-Angliæ pulchellus.**—This is perhaps one of the finest of this section of Star-worts, the flowers large and of a useful shade of colour in the garden at this time; the plant is also robust and can care for itself for years when once planted.

**Aconitum japonicum** is welcome for its mass of deep violet-blue in the border at this time, and being dwarf-growing and of easy culture, should find favour on this account. One or two other late-flowering species have deep-coloured flowers, but the above is perhaps among the best.

**Lycoris radiata** or **Nerine japonica.**—Bulbs of this plant are now flowering in the open air in my garden. They were planted there some two years ago and left undisturbed. Has this plant flowered anywhere in the open ground in England?—ALEXANDER WALLACE, *Colchester.*

**Clematis coccinea.**—Flowering sprays of this remarkable and interesting species were included in an exhibit from Messrs. Paul and Son, Cheshunt, on Tuesday at the Drill Hall. Though of great interest, it has scarcely proved so useful as was expected when first introduced.

**Coris monspeliensis.**—This is a dignity relation of our garden and wild Primulas, and I should be most grateful to the writer of the note in THE GARDEN (p. 231) if he would kindly tell me where or whence fresh plants or seeds of it may be obtained. It is said to be wild in South Europe

and North Africa, but I have asked for seeds from Montpellier in vain.—F. W. BURRIDGE.

**Saintpaulia ionantha.**—This pretty little plant is now flowering freely in quite small pots, and by its many buds promises a long display of its richly-coloured blossoms. Of easy culture and free-flowering, it is worth attention where marginal plants are required for the conservatory and such places.

**Agathæa cœlestis.**—Though usually grown in pots for winter flowering, this plant is very useful in the flower garden. From cuttings that are rooted quite early in the year and grown on quickly good plants result, and these, if pinched once or twice before planting out, will make capital bushes and flower freely during the greater part of the year.

**Gypsophila libanotica.**—For its very distinct and pleasing growth as well as the dainty truss of pure white blossoms, this should prove a welcome plant for late summer flowering in the rock garden. The habit is compact and generally neat in appearance, the leaves of a distinct glaucous shade and each about 1½ inches long. The flowers are rather numerous, in a compact terminal truss.

**Crassula Cooperi.**—A species bearing this name obtained an award of merit at the Royal Horticultural Society's meeting on Tuesday last. The example in question was a mass of reddish crimson blossoms, though the species is recorded in the "Dictionary of Gardening" as "white" flowered. In the masses of its flowers and colour the plant bears some resemblance to *C. rubicunda*, though somewhat more dense than we remember the latter species.

**Begonia Lafayette.**—This remarkable kind promises, both by the fine colour and the great quantities of its blossoms, to surpass what are known as the bedding kinds. The intense crimson-scarlet hue is very telling, the more so when it is remembered that the season for such things is drawing to a close. The plants exhibited by Messrs. Veitch on Tuesday at the Drill Hall were lifted from the open ground the day previous, and were apparently little the worse.

**Sedum spectabile.**—Freely planted either in beds or groups in the rock garden this is very effective at this season, and cannot fail to be duly appreciated. There are times, however, when such a plant can be misplaced, and quite recently an instance came under my notice. Attracted by a large group of the *Sedum*, I found on the opposite side a fine clump of *Colecium* in flower—a rather unfortunate as well as unusual association. In the *Sedum* we have a colour safe almost anywhere in early autumn.—E. J.

**Potentilla nepalensis.**—This brilliantly-flowered species, which is not unfrequently referred to under *P. formosa*, is certainly in point of colour one of the most telling plants in the rock garden. The shade of colour is by no means common among hardy plants, and may be best described perhaps as brilliant reddish carmine. But though only medium-sized blossoms, the trailing stems produce a profusion of flowers that makes their presence felt. Where the rock garden is large enough to allow this plant to trail at will, it will produce a very unusual and brilliant array of its richly coloured flowers.

**Tropæolum speciosum** (Flame Flower).—This very brilliant climber is still producing its vivid blossoms. In some instances where the long trails have ascended into the adjacent shrubs and the lower branches of the trees, a very pretty effect has resulted. Usually in the southern counties at least a difficult or a slow plant to establish, it well repays all efforts in this direction, when at length success is assured. Where *Rhododendrons* abound it is a capital plant to grow among them, and when established and flowering away far into the autumn months above the plants named the effect is unique.

**Erodium supracanum.**—It is surprising what a profusion of flowers even quite small plants of

this will produce. Some nice plants of it in the rock garden have been pleasing for three months at least, yet never at any one time making a great show. Depending on the size of the tuft the number of flowers will be in proportion to the number of spikes or blossom, as only very few flowers on each spray expand at one time. In this way a long succession of bloom is kept up, and as the sprays are produced in great profusion the plants appear to be always in flower. For the rock garden the *Erodiums* are very useful, the blossoms prettily marked or veined, and the foliage pleasing in the extreme.

**Chrysanthemum Lady Fitzwygram.**—The good qualities of this plant are becoming better appreciated. The blossoms are of the purest white, and on this account are more highly valued than those of *Mme. C. Desgrange* with their yellowish shade of colouring in the centre. To see the variety under notice at its best it should be freely disbudded, and from eight to ten flowers allowed to develop. These attain to a good size, and are useful where a bold effect in vase decoration may be wanted. Plants in the open are just now looking at their best, the diameter of each being quite 2½ feet, and, owing to a slight disbudding, freely covered with blossoms of a useful size. This is one of the dwarfest of the early Japanese sorts, rarely exceeding 2 feet in height.

— This useful dwarf-growing kind, which in some districts is very difficult to grow, was shown in superb condition at the Drill Hall this week by Earl Percy, Syon House (gardener, Mr. Geo. Wythes). The plants, without an atom of training and no disbudding, were little more than 2 feet high, pots and all, and about the same in diameter, the compact little bushes being simply loaded with fully-developed, pure white blossoms, and almost endless buds that will carry on the display and yield material for cutting for weeks to come. There were about a score of plants from Syon, so much alike all round that they may have been grown in a mould, so perfectly uniform were they in every respect. Indeed, it would be difficult to surpass the standard of excellence attained in these plants, which, with buds and blossoms complete, constituted one of the best examples of natural growth and freedom of flowering I have seen. Many of the most useful and freest flowering of decorative *Chrysanthemums* are irretrievably ruined year by year by an over-rigid system of disbudding, but which, I am glad to find, does not find universal favour in all gardens.—E. J.

**Silene monachorum.**—Where a thin carpet is required either in the rock garden or elsewhere that would be specially suited to clothe the surface where small bulbous plants are grown, this plant should meet almost every want. Not in the slightest degree rampant, over-dense, or deep-rooting, it is nevertheless a perfect carpet plant, covering the earth with its small leafage and in summer clothed with a profusion of pure white flowers. Frequently carpet plants are too dense and, for the plants below them, take too much from the soil. A dense carpet should only be tolerated for deep-rooting subjects and strong growth, and it cannot be supposed that what is a good carpet for a bed of *Roses* would be equally suited for *Snowdrops* and other such things.

**Salvia splendens grandiflora.**—On Tuesday last there were two exhibits of this splendid plant at the Drill Hall, and of its great value there can be no doubt. Much the finest examples were those from Messrs. de Rothschild (gardener, Mr. Jas. Hudson). The plants in this instance, notwithstanding they were merely cuttings of the present year, were veritable specimens between 3 feet and 4 feet high, and completely loaded with long spikes of vermilion flowers. A more brilliant flowering plant in the open garden in September could not possibly be conceived, the spikes of flowers alone being upwards of a foot in length in numerous instances. These handsome bushes were grown in the open till about three weeks

ago. A year or so ago cut spikes came from the garden of Sir Trevor Lawrence, and these, foliage and all complete, were between 2 feet and 3 feet in length, thus showing their great value in a cut state. Such a plant as this will prove of the greatest service for filling large beds in the summer or in pots with a slightly altered method of culture for autumn and winter flowering.

**Lilium longiflorum eximium.**—Though somewhat late in the year, a very handsome group of this beautiful Lily may now be seen flowering in No. 4 greenhouse at Kew. Of its value there need be no two opinions, for in many respects it is quite unique. Large and handsome individually, and singularly pure and chaste in the snowy whiteness of the glistening flowers, it is perhaps one of the most valuable members of a genus replete with many of the choicest gems that are to be found among bulbous plants. Treated as at Kew, with three or more bulbs planted in a 9-inch pot, a very fine display is the result, several stems, each rather under 3 feet high, being crowned with some half-dozen of the spotless, trumpet-shaped blossoms. Such grown plants are eminently fitted for conservatory decoration, while the profusion of blossoms and pleasing and delicate fragrance are items that are always appreciated. Not least of its many claims to notice is the abundance of fresh green and shining leaves, the latter so very persistent as well as beautiful in this justly popular Lily. It is a kind, moreover, that by various methods of treatment may be had in flower for many weeks in succession.

**Notes from Baden-Baden.**—Notwithstanding cool and very rainy weather, *Colchicum giganteum* is in full flower just now. The flower is larger and the colour much deeper than in *C. speciosum*. *Linaria pancei* is a showy perennial, the flowers large, yellow and orange, set off to advantage by the broad, massive glaucous green foliage and the elegant habit of the plant. It is a native of Southern Serbia and quite hardy. *Gerbera Jamesoni* is very fine this year, throwing up flowers since May and likely to continue so until frost sets in. Every visitor admires the vivid scarlet of the Aster-like flowers. It is easily lifted now and replanted in March or April. *Delphinium caucasicum* is also showy with lax spikes of large sky-blue and bright blue flowers. *Delphinium speciosum* var. *glabratum* is a very showy plant from the north of Kashmir. It flowers in a panicle about 3 feet high, and the blooms very much resemble those of *D. cashmerianum*. It is a robust and distinct species. Since June *Incarvillea variabilis* has been flowering freely. It is a Central Asiatic species and has a half-shrubby habit like *I. Olge*. The flowers do not last long, but there is a constant succession. They are not so large as those of *I. Delavayi*, but of the same colour, and their constant succession in combination with the finely cut bright foliage gives the plant a peculiar charm. It comes close to *Amphicome Emodi*, but is more shrub-like, about 3 feet in height. *Kniphofia Tysoni* is also flowering now; it much resembles *K. caulescens*, but the foliage is more massive, broader, and of a glaucous bluish tinge. The flowers, not gaudy, yet striking, are brick-red, changing to white with a slight tinge of green. All in all, it is a stately plant.—MAX LEICHTLIN, *Baden-Baden*.

**The weather in West Herts.**—A week of very changeable weather as regards temperature. For instance, on the 18th the reading in shade at no time exceeded 54°; whereas three days afterwards the shade temperature rose to 66°. On the night preceding the 19th the exposed thermometer fell 1° below the freezing-point, making this the first frost, although a very slight one, of the present autumn. The ground at 2 feet deep is now about 2° colder, and at 1 foot deep about 3° colder, than is seasonable. Rain fell on three days during the week, but to the aggregate depth of less than half an inch. No rain-water at all has come through the heavy soil percolation

gauge for four days, showing that the soil is now in good working order and free from superfluous moisture.—E. M., *Berkhamsted*.

**Lily bulb disease.**—I have read Mr. Massey's paper (pp. 220-1) on Lily bulb disease with great interest, all the more because it corroborates the opinion I have always held, that, given a sound unbroken skin, plants and animals may by defiance to external fungoid germs. He writes "Germ tubes could not enter the tissue through the epidermis," and again, "The fungus cannot penetrate the unbroken tissue of the bulb, but gains an entrance through wounds, more especially broken roots." The same holds good with the Potato disease, and I have just now been observing, in a moist patch in my garden, Potatoes which had been bored into by worms or slugs, and had cracks in their skins, showed signs of disease commencing about the edge of the wounds, the sound-skinned Potatoes mostly escaping. (Of course the disease may enter through the epidermis of the leaf or stem after it has been attacked by the little insects which breed there, as I have shown many years ago, but till this year I never got the evidence of disease commencing in the tuber where the epidermis of the tuber had been destroyed.—DR. ALEX. WALLACE, *Colchester*.)

## PUBLIC GARDENS.

**The preservation of Highgate Woods.** In spite of the strong protests of the inhabitants of the neighbourhood and others interested in the preservation of the natural beauty of Highgate Woods, the Charity Commissioners some time ago sanctioned a scheme put forward by the Hornsey Charity Trustees for the demolition of the almshouses in Muswell Hill Road, Highgate, and the purchase of a piece of the Churchyard Bottom Wood, the whole of the land to be converted into sites for villa residences. It now appears that there is still an opportunity for preserving the wood intact, for, though the almshouses have been demolished, the Hornsey Charity Trust have not yet been able to let the land on building leases. If the movement which has been set on foot for purchasing the wood from the Ecclesiastical Commissioners for £25,000 could be carried out speedily, before the land above mentioned has been disposed of, it might also be possible to secure this land which forms the front of the wood to Muswell Hill Road. The Great Pit Wood, secured to the public some years ago, has a frontage to the other side of the road, that at present the two woods form a large stretch of open country. If a row of villa residences erected on the trustees' land, this continuity unfortunately be broken.

**List of Roses (Smith and Jones).**—We should think "The Rose Garden," by Wm. Paul, Waltham Cross, London, N., would answer your purpose.

**Names of plants.**—*T. Scott.*—2, *Oxalis Ortgi*—*A. C. Bartholomew.*—Looks like a Cassia, but far gone to be quite sure.—*Co. Cork.*—1, *Crataegus Pyracantha.*—*J. F. H.*—*A Bromelia*, probably *Æchmea*, but cannot name without flowers.—*E. Clark.*—1, *Lilium Kratzeri*; 2, *Helianthus decapetalus*; 3, *Veronica spicata*; 4, we cannot undertake to name Asters; 5, *Pyrethrum uliginosum*; 6, *Cypripedium Spicerianum.*—*W. C.*—1, *Ceanothus azureus*; 2, *Escallonia macrantha*; 3, *Ampelopsis sempervirens*; 4, *Rose China Cramoisi Superieur*; 5, *Eleagnus pungens variegatus*; 6, *Weigela aurea*; 7, *Diplazium chrysophyllum.*—*G. A. M.*—It is possible that *C. tatei* *Maid* or *Rosa Mundi* is the Tulip to which you refer.—*Southampton.*—1, *Virginian Poke* (*Phyllaea decandra*).—*W. Richardson.*—*Diplazium Brearleyana.*—*J. S. Stirling.*—1, probably *A. laevis*.

**Names of fruit.**—*J. E. D.*—Apples: 1, *Ribston*; 2, *Carlisle Codlin*; 3, *Blenheim Orange*; 4, *Alfriston*; 5, *King of the Pippins.* Pear: 6, *Autumn Bergamot*.—*Rev. J. C. Ross.*—1, *Old Keswick Codlin*; 2, *Hornsea's Pearmain*; 3, *Improved Keswick Codlin*; 4, *King of the Pippins*; 5, *Cellini Pippin*.

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## ORCHIDS.

### NIGRO-HIRSUTE DENDROBIUMS.

This section of the genus is quite a distinct one, although the various species contained therein require somewhat different treatment, there is a certain affinity amongst them that they are easily recognised by. One and all are beautiful plants when well done, but it must be admitted at the outset that they are more difficult to cultivate than the majority in the genus, not from any weakness of constitution exactly, but such as *D. formosum* are really strong growers, but because of a habit they have of going back after a few years' growth in this country. The reason of this lies entirely in the atmospheric treatment; there can be no doubt of this, for it is easy enough to provide a suitable root-run. A few years ago I had several beautiful specimens of *D. Draconis* established through pieces of Apple wood. Hardly an inch of the block could be seen; it was simply covered with long white healthy roots in each direction, and had it depended upon the rooting medium then these plants were safe as long as the wood lasted. The first sign of a failure was a few of the young leads damping off with no apparent cause; the consequence was when the back breaks appeared the season was too far advanced for these to ripen properly, and after that their decline was rapid. To entirely prevent this kind of thing is impossible, and the most that cultivators can do is to study closely the habit and manner of growth of the individual species, shaping their treatment to meet this as far as practicable. Indeed, the plants themselves vary, even of the same kind, as anyone who has a large number of one species may see for himself, and this shows how little use it is giving stated times of such cultural operations as are necessary. It is a few of the more salient of these may be touched on with advantage. Watering at the root is an important point, as on it depends the

health of the plant in a great measure. Many of the species included in this group are in a state of Nature deciduous, or nearly so, but cultivators have long since found that in this respect, at least, it is unwise to follow natural conditions exactly. If we dried these plants at the roots sufficiently for the foliage to fall off every autumn, or whenever the bulbs ripened, in all probability there would be no foliage to fall the next season, or at all events the plants would be so weakened that they would cease to have any value. On the other hand, if we water the roots too heavily during the time growth is inactive we run the risk first of killing the roots, and also, if much heat is afforded, of starting the plants into a weakly, unseasonable growth; but by just giving enough moisture to the roots to keep the leaves fresh into the second season, it is possible to keep the basal eyes dormant without unduly wasting the energies of the plant.

This leads to the consideration of the compost, for if the roots are in an unsuitable class of material it is quite impossible to maintain the health of the plant. They are damaged by contact with soddened and soured material, the green feeding tips decay, and, in consequence, the root first fails to perform its functions of carrying moisture for the need of the plant, and ends by dying outright. Whatever is used, then, must be of such a character that it rapidly parts with water. Peat and Sphagnum Moss are both excellent material in themselves; in fact, indispensable to the Orchid grower; but too much of them, without division of the bulk by adding crocks, charcoal or some similar material, leads just to that condition we are trying to avoid. Better by far for any epiphytoid Orchid to be grown in a mixture that runs dry two or three times a day than for the progress of the roots to be hindered by a close and water-logged compost. Take the beautiful *D. infundibulum* as an instance; place it in a narrow pan, the depth of which only allows of about an inch of compost. In the growing season this will want watering daily at least,

but the roots will take hold of every particle of compost and every inch of the inside of the pan. This is the way to get healthy growth. Put the same plant in a large pot where the roots have several inches of material before they reach the sides, and they never get there, the plant always being unhappy. Temperature is another important point, and depends largely on the habitat of the species. Such as *D. formosum* and *D. Draconis* are found low down in Burma and Moulmein—in some of the hottest parts of the world, in fact. To grow these in company with *D. infundibulum* or *D. Jamesianum* that occur at an altitude of several thousand feet in the same country is obviously wrong. This then must be the grower's care with this beautiful section of plants—not to treat them all alike because they are all *Dendrobiums* and somewhat similar in habit and inflorescence, but take them individually and study the wants of each. They are all subject to the attacks of thrips and red spider if the atmosphere is kept too dry in the growing season. This must be avoided, and as soon as the first signs of insects are observed at once take means of ridding the plants of them, for with them they cannot be healthy for any length of time. R.

**Burlingtonia candida.**—A basketful of this pretty species with a dozen of its spikes of pure white blossoms has a nice effect just now, the little yellow stain on the lip being just enough to enhance the beauty of the snow white on the outer segments. It is a native of Demerara, and an Orchid that anyone might grow with a little care. The most frequent mistake in its management is allowing the rhizomes to extend and carry the roots out of the reach of the compost. It does well in the Cattleya house in a light position, a moist atmosphere and plenty of water at the roots being required while growing.

**Cymbidium Hookerianum.**—This I noted last week in good order, the large yellowish flowers with crimson markings having a very fine effect against the fine foliage. It is a good deal like *C. Lowianum* in habit, and like it does much better and flowers more profusely in a house kept

cool, airy and moist than in a very high temperature. It is rather a gross feeding plant for an Orchid, and likes abundant moisture during the growing season. Even when at rest the roots must not be dried, or the pseudo-bulbs soon shrivel badly. It is very subject to the attacks of a small brown scale insect, and this must be kept in check by sponging. It is a native of the Himalayas, whence it was introduced in 1866.

**Dendrobium leucolophotum.**—This is not a showy species or one that produces more than an average quantity of flowers, but these are chaste and pretty, and occur when not many others of the genus are flowering. It is not often seen in cultivation, and is an erect-growing plant upwards of a foot in height, the flowers occurring on racemes from the upper part of the pseudo-bulbs. They are small, almost pure white, with a greenish tinge at the base of the segments. Plenty of heat and a moist house are needed to grow it well, as it is a native of the islands about the Malay Peninsula, whence it was introduced in 1881.

**Oncidium roseum.**—The flowers of this plant are extremely useful for cutting, as they may be had almost any length and last a long time in good condition. It is one of the prettiest of the non-bulbous kinds, and not difficult to cultivate. It grows fairly strong, so may have pots of good size and an open compost, consisting of peat and Sphagnum, over abundant drainage. It does best in the Cattleya house in a light, almost unshaded position. During the time growth is active a very liberal supply of moisture is necessary, but during the winter months a good deal less suffices.

**Catasetum tridentatum.**—I recently noticed a fine spike of this singular Orchid in bloom at Melford Hall. It is one of the strongest growers and one of the most easily cultivated, the spikes containing a great many flowers, each about 4 inches across. The segments are all stiff and ungainly looking, and the singularly formed lip has the power of ejecting the pollen when the horn-like processes on the column are touched with a pencil. It requires plenty of heat and moisture while growing and to be potted in peat and Moss. After the pseudo-bulbs are fully matured it must have a long dry rest.—R.

**Galeandra Baueri.**—This is a very pretty species when well grown, the colour of the blossoms being an effective combination of greenish-brown, purple, and white. The lip is funnel-shaped, open in front, the white portion being outside. The flowers, each upwards of 2 inches across, are produced on drooping racemes from the top of the stem-like pseudo-bulbs. It is best grown in a warm moist house with plenty of water at the root from the time the growths start at the base until the flowers are over. Afterwards the plants may be gradually inured to cooler and drier treatment, the roots also being kept on the dry side. It likes a fairly substantial compost and to be grown in pots on the stage.

**Dendrobium superbienis.**—This beautiful Dendrobe I have just noted in good condition. Few kinds vary more than this in quality, the rich, warm crimson-purple tint on the sepals and petals of the best varieties being showy and fine in the extreme. The racemes occur at the upper part of the stems and bear each about a dozen flowers. It is not a difficult plant to grow, and the stems flower profusely if well ripened by exposure to sun and air. Although a strong-growing plant, very large pots are not necessary, the roots apparently preferring rather to coil about in a small area than push far away. It is a native of the islands in the Torres Straits, whence it was introduced in 1876.—H.

**Epidendrum inversum.**—This comes from a correspondent for a name, and it is an old, almost forgotten species. In habit and general characteristics it is not unlike the better-known *E. fragrans*, but larger. The peduncle rises from the apex of the club-shaped bulb and bears a dozen or more flowers, each being about 2 inches across and closely crowded together. The sepals, petals

and lip are all pale creamy yellow, the latter being freely marked with purple. It does well in the Cattleya house and is very inconstant in its time of growing, resting and flowering; consequently, it is not easy to recommend how it should be treated as to moisture, but when growth is active it of course requires more than when at rest. It is a native of Minas Geraes, in Brazil, and was introduced in 1839.

#### CATLEYA LUDDMANNIANA.

THIS species forms a useful connecting link between *C. Gaskelliana* and *C. labiata autumnalis*, but cannot be said to be a rival in any way of either. It is not so free-blooming, as a rule, as Gaskell's *Cattleya* or the older species, but, nevertheless, should be grown. Like all this section of plants, cultivation alters their habit to a marked extent, and it is often difficult to detect any difference between many of them when out of flower. The foliage of *C. Luddemanniana* is, however, often much thinner in texture than that of the species mentioned above, the stems, too, being straighter and smoother, and of a pale green tint. It is a very free grower, this fact, in some instances, accounting for its paucity of flowering, and it must be said of some plants of it that it seems almost impossible to get them to bloom. The most likely means of bringing the plants into flowering condition is growing them from first to last in an airy, light house where the atmosphere and temperature keep steady and the plant can be arranged far enough from the roof to do away with much shading. It should also be kept dormant after the flowers are past, or if the plants have not bloomed after the season's growth is complete. It is no use allowing sudden drops in the temperature and withholding water all at once, as some cultivators still persist in doing with refractory subjects. In one case out of a dozen it may be successful, but in nearly every one it predisposes the plants to the unsightly spot, to which they are subject, and weakens them materially in other ways. Let them have the change by all means, and keep the plant quiet if possible, but bring this about in a more natural and gradual manner, and it will be far more effective. The habit of the species is to bloom upon the young growths like *C. labiata*, not to rest in sheath, like *C. Trianae* or *C. Mossiae*. The blossoms are of medium size, the sepals much broader than the petals, of a delicate purplish rose, with a white suffusion. The lip has a deep purple front lobe, the base lighter in colour, with radiating lines of purple and a paler area on each side, like some forms of *C. Mendeli*. It needs a fairly large pot or basket, as the roots like to ramble freely over large rough lumps of charcoal or similar material, and otherwise it may be treated similarly to its relative mentioned. It is named after a French gardener, with whom it first flowered under cultivation, and presumably it was imported with a consignment of *C. Mossiae* or some other kind from the same locality. It first flowered in Britain in 1863 in the Meadowbank collection.

**Oncidium Kramerianum aureum.**—In this pretty variety, which I noticed in flower at Mr. Bull's recently, the greater part of the lip was of the clearest lemon-yellow, and the margin of chestnut-red, although well defined, is not so broad as usual. The pretty twist in the sepals adds very much to the beauty of the flower, and it is far superior, in my estimation, to *O. Papilio*. Both do well in plenty of heat and moisture and a light, sunny position.—H. R.

**Lælia monophylla.**—This is quite distinct from all the other *Lælias*, and a bright effective little plant. It consists of upright stems each about 6 inches high. The flowers, borne singly, are each less than 2 inches across and orange-scarlet in colour. It does not require much heat, as, though it comes from Jamaica, its habitat is high up in the mountains. The most convenient way of growing it is to plant it in baskets or

shallow pans of peat fibre and Moss, hanging these up in the lightest position at command the *Odontoglossum* house. The stage is too much shaded in this house, as a rule, for this kind to satisfactory, nor is too damp a condition of atmosphere any advantage to it, especially in winter. Moisture it delights in while making growth, but shade, moisture, and a very cold atmosphere combined are too much for it. I recently saw some nice plants in a house devoted principally to *Masdevallias* of the *Chimara* group where the temperature in winter never fell below 50°, and these appeared happy under the circumstances. It is not a novelty, having been so long home from Jamaica to Kew in 1881, where it flowered the year after.—R.

#### KITCHEN GARDEN.

##### PLANTING CABBAGE IN AUTUMN.

THIS is a simple matter in certain soils, but the reverse in light land deeply dug and well manured. I think the Cabbage much more tender if planted in light, over-rich soil. In the spring the plants bolt badly. "J. C." a few seasons ago advised a firm soil for spring Cabbage, and I quite agree with him, as though the autumn growth is less strong, the plants being more sturdy are in better condition to battle against our variable winters. I do not even dig and manure my land for the spring crop, and I need a good quantity. Cabbage follows spring-sown Onions. The land is well manured for the Onions, and is then merely hoed and raked and drills drawn. Many will not agree with me, and think such a grower will need food at the roots to promote strong growth. I do not foster a strong growth as though I am aware it is necessary for plants to get a good root-hold before the show days, a gross growth now means a severe check should hard weather follow. Of course, heavy clay soils my note may not be applicable. I am dealing with a light, old garden soil, just the kind where one fails on account of richness and loss of roots in severe seasons. For me in such a soil I was troubled with spring Cabbage running, but with a hard root-run a less food at planting there is no difficulty, as I have five plants in a thousand run. The Cabbages put out early in September are nice compared with the end of October. Previous to draining soil well up to the lower leaves to protect the stem, each plant is well trodden round to make it as firm as possible. It is an easy matter to feed young plants, say in February or March according to season, if growth is forward, as that date by using liquid manure, guano, or other fertilisers, the plant gets the food just the time new vigour is needed. I have used nitrate of soda in March to great advantage with strong plants and in soil none too rich. I vary the Onion quarters as much as possible with the result that in some years the land is much poorer. Nitrate of soda applied in showery weather as a fertiliser is a powerful manure, but I prefer to give two dressings to a strong one, and at the rate of 2 cwt. to 3 cwt. per acre. I plant rather closely, only 15 inches between the rows and 1 foot between the plants. A later lot is given 18 inches and 15 inches, but the varieties are small. Ellam's cannot be beaten, and Mein's No. 1 for succession is equally good. It may be thought Cabbages planted at distance named are too close. I do not allow the spring Cabbage to grow large. Cutting begins early, and it is an easy matter to thin out. The reason the later lot is given more space is to allow of hoeing freely between

rows, as being later there is more difficulty with weeds.

G. WYTHES.

**Lettuces failing.**—Will any of your readers tell me how to get rid of a parasite that has infested the roots of my Lettuce plants for the last two seasons? On pulling up a plant the root appears covered with white mould, among which are numerous yellowish insects, somewhat larger than cheese mites. The plant does not wither, but the effect is to completely paralyse its further growth and prevent its hearting.—W. L. A.

**Maize as a vegetable.**—This is not often grown for use as a vegetable, but it is well worth growing in any garden where variety is valued, and any persons who at first object to its taste in a short time appreciate it. This has been a grand reason if the plants were given an early start. In starting early I mean sowing the seeds under glass, and potting off singly, or pricking them into boxes. I am aware seeds may be sown in the open, as the plant is a quick grower, but though it makes a fair growth, in our variable climate it fails to produce good fruits, hence the importance of sowing under glass in March for a first crop. Well-cooked, it is a nice vegetable, and by some thought to be nutritious. There are several good varieties to select from.—G. WYTHES.

**Carter's stringless French Bean.**—I think I have seen this Bean mentioned in THE GARDEN before by Mr. Wythes, of Sion House. At any rate, it is an acquisition in more ways than one. I have grown it this summer, and just when it is in full growth the weather was very hot and dry. Yet in spite of this the haulm showed no signs of distress, was not affected by red spider, and I set a grand crop of pods. These, as its name implies, have no strings running up the sides of the pods, as all others have, more or less, even when not old. Consequently, they can be prepared in a very short time. Another good trait of its character is the long time the pods remain in a usable condition. The flavour is first-rate. Perhaps it is scarcely hardy enough for first early sea-air sowings, but for mid-season and later sowings it is certainly unsurpassed.—J. CRAWFORD.

**Autumn-sown Carrots.**—Small, tender, sweet Carrots seem now to be indispensable in all large gardens, as cooks are constantly asking for them. In warm sheltered gardens where the soil is light, and door sowings do fairly well, but the best results are obtained when a frame is given them. In cold, wet autumns the young roots do not always go away so freely as wished for, and are liable to be attacked by grubs. These pests need to a certain extent be guarded against by the use of wood ashes when getting the bed ready, and these are also a good stimulant. When sown in a frame, codling need not be practised, the plants being drawn off in fine weather and tilted over the young roots during heavy rain, snow, or frost. A little more thinning out of the young plants is needed from autumn sowings than from spring and summer ones, growth being less vigorous and the days darker and colder. Market Favourite is one of the best varieties for sowing at this time of year.—C. C. H.

**Autumn Peas.**—Those who have got a good supply of late Peas are to be congratulated, as in light soils on gravel it is very difficult to get a full crop in a hot, dry summer such as we have just passed through. In a good loam and in other localities there is no lack of good autumn Peas. When I lived in the north and midland counties I had fair crops well into October, but in the south, with more than ordinary attention, there is little return for one's labour. We certainly have an advantage in the earliest supplies, and such soil we can grow the best type of Marrow Pea, which would decay in colder districts. We have thus some advantages. On the other hand, our lot is now made easier, as some of the dwarfier types, such as Sutton's Latest of All Dwarf Mammoth and Michaelmas Peas are so robust, that these, if sown late, will give a good

return if a little care is taken in getting the seeds to germinate quickly. Many growers in poor soils do not think the extra trouble to procure autumn supplies worth taking, but I think the more variety of vegetables anyone can give the better, so that I am in favour of autumn varieties.—G. W.

**Tall v. Dwarf Peas.**—Many people wonder why market gardeners do not grow tall Marrow Peas in the same way as one finds them in the gardens of the wealthy landowners. The reason is simple enough. To buy stakes tall enough for British Queen or any other tall Marrow would entail a cost of several pounds per acre. Consequently, it is only dwarf kinds that are in demand for field-culture. This is no reason why good Peas should not be forthcoming much longer than they usually are. This season I have grown English Wonder for both the earliest and the latest crops, and during September Peas have been equal to any of the year. As the soil was dust dry in July when the last crop was sown I took out shallow trenches about a foot wide and 6 inches deep, and spread a good layer of quite rotten manure in the bottom, with just enough soil to make it when finished ready for seed, about 2 inches below the level. The seed was then scattered thinly all over the surface and covered, and one good soaking of water given. The Peas grew away rapidly and quickly came into flower, and have yielded excellent gatherings for a long time, although the haulm was very short. In this locality English Wonder has, to a great extent, supplanted American Wonder and William Hurst, and as Pea-sticks in suburban districts cost about as much as the Pea crop would realise, I need hardly say that the demand for tall Peas gets less every season. I think it is only a question of time, when tall Peas will disappear from the neighbourhood of large towns altogether.—J. G., Gosport.

#### THE CARTER SPINACH.

No doubt readers of THE GARDEN have come to the conclusion that the declaration of Messrs. James Carter & Co. re the above Spinach (p. 222) is correct, and settles the matter. The note at page 222 says "that an award of merit was granted to the variety by the fruit committee on July 11, 1895." I thank the firm greatly for furnishing me with these data, because I am enabled to turn to the Royal Horticultural Society's Journal, which it would be well if all gardeners could have; and in the issue of August, 1895, in the report of the proceedings of the fruit committee on June 11, p. 36, I find this: "Award of merit to Spinach Longstander (or Lent à Monter of Vilmorin), votes unanimous, from Messrs. Carter and Co. A very fine variety grown at Chiswick; the leaves large, pale green, very late in running to seed." How the firm can claim that the award was made to a variety named The Carter, I, as also every reader, fail to see. Turning now to the meeting of the same committee, held June 25 (p. 39), that is, two weeks later, I find this: "Messrs. Carter and Co., High Holborn, submitted examples of Longstander Spinach and of a variety named The Carter. These seemed to closely resemble each other. It was recommended that a trial of Spinaches be made at Chiswick next year." Here, as is seen, The Carter as a new variety comes first on the scene, and the fruit committee for I remember the circumstance well—at once resolved to ask the council to have a Spinach trial the following year. Now we will see what came out of that trial, which took place in 1896, and which was, too, as good a trial as could have been furnished anywhere in the kingdom. Here is the prelude to the result of that trial, as determined by the fruit committee when examining the varieties on May 23, 1896: "Thirty-three stocks of Spinach were received for trial, and all were sown on April 4. In spite of the dry weather, the seed germinated freely and the plants grew well. The result of the trial proved that there are really only a very small number of varie-

ties, and also that the round, dark-leaved sorts are the true Longstanding, and the light green are not." The varied nomenclature was astonishing, and showed great confusion. The so-called varieties were divided into round-seeded and prickly-seeded, but it cannot be too widely known that mere presence or absence of spines on the seed does not constitute a variety, for the Longstander, for instance, with its thick, round, dark green leaves, is just the same plant whether from round or prickly seed. So also with the Flanders and the Virolay. The trial is reported in the August number of the Journal for 1896, commencing at p. 69, and shows in detail exactly the true section or variety to which each so-called one belongs. Thus I find No. 29, The Carter, is the same as No. 12, Longstanding Round (Sutton and Sons), this being similar to No. 20, which is Heinemann's stock of Longstanding, the best stock of the variety grown; so also are Lent à Monter (Vilmorin) and many others. Thus it is seen that after all in asking how far The Carter Spinach was distinct from others in commerce and was amply justified, I leave to others to draw their own conclusions. As a member of the fruit and vegetable committee who knows thoroughly the value of trials at Chiswick, I feel it to be my duty to hold loyally to the results of those trials. If the work done at Chiswick is to be entirely ignored, then the gardens might as well be closed.

A. D.

**Winter Spinach thinning.**—The thinning of winter Spinach is at times overlooked, owing to late sowing or press of work, but it is an important matter, as the plants when at all crowded do not make a firm growth, with the result that with sharp weather or cutting winds the leafage is much injured. In thinning, each plant should be given ample space, so that the leaves do not touch each other. The Victoria and Long Standing require more space than the older forms, the leaves being stouter, and, if much crowded, the plant becomes naked at the base and is damaged by winds, the leaves turning yellow and decaying. I find when Spinach is given plenty of room there is less trouble with slugs and a better return. Early thinning is important to secure a good growth, and I think the old theory that the non-thinning of winter crops with the idea that thickly-grown plants protect one another will not find much favour in these days. When the best culture is given there will be fewer losses. A sturdy plant can battle against our variable climate, whereas a weak plant goes to the wall.—L. H. B.

**Peas and green fly.**—My experience is quite different from that of "S. F." (p. 175), who says that dwarf Peas are more subject to the attacks of green fly than tall ones. Much depends upon the soil and cultivation, and I think the 3 feet to 4 feet Peas suffer more from insect pests than the taller ones. I admit varieties with a stout haulm, such as Eureka, Maincrop, Marrowfat, Peerless, and Magnum Bonum—all 3 feet Peas—are better able to resist mildew than the 6 feet varieties, and my plants are free from green fly. On the other hand, the old Ne Plus Ultra and Criterion, taller varieties, were badly infested. A mistake often made with Maincrop Peas, especially these robust 3 feet to 4 feet varieties, is thick sowing, as, if at all thick, they are soon attacked by insects, and, having more succulent leaves, are more liable to attacks. At p. 155 Mr. Tallack gives us a good note on the medium growers. He notes the value of Autocrat, one of the 4 feet kinds, and also others of a dwarfier type. I think we have a splendid selection in these kinds, and so far I have not found them so subject to mildew as the tall ones. Of late I notice there have been several interesting notes mostly on this class of Pea in these pages, showing how well they have done in an adverse season.—L. M.

**Parsley growing for sale.**—I have always thought Parsley a good paying product. Everybody uses Parsley, and in gentlemen's kitchens it is indispensable. As to price, even in the summer

months from 3s. to 4s. per dozen bunches wholesale are easily realised, the bunches, by the way, not being very large. It is, however, in the winter months that it pays best, the price per bunch then usually rising to 4d. or 5d. Even if the weather is open and in times of severe frost a fabulous charge is often made in large towns. I maintain that were market gardeners of the smaller type to grow more for a winter supply it would pay them well. If sown in long narrow beds and a rough wooden framework erected over them, these being covered in severe weather with home-made straw hurdles, exposing them again in fine weather, the crop could be preserved in good condition and the hearts of the plants saved from ruin, so that an early and good start would be made in February and good fronds produced during April and May, a time when after a trying winter Parsley is at a premium. The large growers have, as a rule, no lack of this commodity, but it is the smaller country growers who seem to be behind in the matter, thus standing in their own light. Then there is something in variety, as Parsley is graded as well as other market products, a dwarf, dense, true strain always being eagerly bought up for garnishing. Occasionally one meets with a small grower who disposes of his Parsley privately to first-class greengrocers, thus saving the fee of the middleman and pocketing the whole of the profit himself.—J. C.

## FLOWER GARDEN.

### HERBACEOUS PHLOXES.

THE statement by "A. D.," at page 239, that "these Phloxes always show their finest form the first year when raised from cuttings," is altogether wrong. A large number of the plants are not distributed from the nurseries till more than a year old, unless it be the most recent novelties. And if the above statement were true, the first and, according to "A. D.," therefore the "finest" flowering is for ever lost. But it is not so. Equally wrong is the additional statement made by "A. D." that "the second year they give several heads of bloom, but less fine." Anyone who has "intelligently grown" these Phloxes for only three years would be able to refute such a statement, so utterly opposed to facts. It is very true that Phloxes do "severely eat up plant food and absorb moisture"; so does an Apple tree or an Oak; but this is not evidence that the time has come for rooting them out and discarding them as being of no further use. And if it be so impossible for the minor roots of a three or even four year old Phlox to find support, what may be expected of many other perennials, to say nothing of numerous shrubs and evergreens, that in these respects could easily outstrip the plants in question? What more voracious things have we than Aster *Novae-Angliae* vars., Helianthus *orgyalis*, or Plantain Lilies, while the very aspect of some species of the last tends to direct even the rainfall away from the plant. Yet few things are more satisfactory, even when six or ten years planted. Equally true, only in a less degree, is this of Phloxes; indeed, I have taken some handsome heads this season from a bed planted six years ago, that would compare very favourably with the finest I have seen at the Drill Hall this year. Briefly as to height, as here also "A. D." appears to have gone astray. At page 189 *Aurore* and *Syphilde*, among others, are said "to be very dwarf," and "blooming at 15 inches in height." Messrs. Barr's list gives these at 2½ feet, and as the latter, which is a capital white, has been even taller at Kew this year, it will at once be seen it is not so "very dwarf" after all. And if a like proportion be added to

those "A. D." describes as "20 inches to 30 inches," it will bring the herbaceous Phloxes to much the same height as they have been for some years. Twenty years ago *Coccinea*, *Edith*, *J. K. Lore*, and *Independence* were reputedly dwarf varieties, and were so, in fact, in the first year. But if these were planted 4 feet apart and left three years in good deep soil, the first will be nearly 4 feet high and the others upwards of 3 feet. I say at 4 feet apart because I note "A. D." imagines height to be caused by overcrowding, which is not likely to ensue at 4 feet apart. I have occasionally seen the well-known *Coccinea* at 18 inches high, though usually poor, puny, and small-flowered, and, like all else where this dwarfness is but the outcome of want of culture, and not natural habit, quite unrepresentative of the beautiful class to which it belongs. Recently divided plants after such a summer of heat would be just of this class unless special means had been taken to prevent it. In many directions there is room for improving these plants, which around London do not receive the attention they did twenty-five years ago, when Mr. Robert Parker, Downie, Laird, and Laing, Forest Hill, and Henderson's, Wellington Road, grew them nearer perfection than I have seen for some time. The Phloxes in all these places were a feature. Many of the best then are the best now with very few exceptions. Phloxes at 12 inches high are not wanted in the garden, and as a fact, happily, do not exist. For years past the tendency has been to elaborate and embellish the beds on the lawn, while the garden all around has been ignored. For this latter purpose these Phloxes are most valuable, and raising their heads aloft are best suited for effective grouping as also for distant effect. For these purposes we do not want them a blaze of colour level with the lawn; rather should they be sufficiently tall to be fittingly associated with other things equally desirable and capable of similarly beautiful and varied effects in the landscape of any good garden. E. JENKINS.

Hampton Hill.

### NOTES ON HARDY PLANTS.

**Clintonia umbellata.**—Those who have grown this interesting herbaceous plant will just now be reminded of the best aspect in which it presents itself in British gardens, because it is now bearing its umbels of large fruits of a bright and light blue colour. Those who have not grown it may be assured of its hardiness, and may perhaps better realise what it is like when it is stated that it is equally correct to call it a *Smilacina* as a *Clintonia*. It does well in an open border if there is a deep moist soil of a black or vegetable nature.

**Shortia galacifolia.**—Charmed as we were in spring by the lovely flowers of this humble, but effective plant, no one can be less so on seeing the highly-coloured foliage at this season; besides yellow there is rich mahogany colour in more or less pronounced shades, which, with the dividing lines of the midribs and veins in paler yellows or on green, is enough to content the most exacting, and the fact that this oval foliage is arranged in pretty tufts, almost rosette-like in many cases, further enhances the value of the plant for autumn, especially where grown quite exposed, as certainly it may be. Indeed, it is my fully exposed group that tempted this note, the more shaded plants being as yet comparatively green.

**Arenaria gothica.**—This is still in bloom, and how large and striking the flowers are for so small a plant! They are pure white, star-shaped, and of a glassy or glistening nature; indeed, the whole plant is notable for its shining character. It is quite a thing to put into chinks in the rock garden, and it evidently can take care of itself, provided rampant neighbours are kept

from reaching it, or, better still, not allowed to be there.

**Primulas—the alpine species.**—I can say that I know for a fact that the mealy root does much harm. I do not like to see it, and some of the healthiest plants I have seen are infested with it, and though I always wash the roots of plants I work at for propagation, I have seen pest propagated with the plant without apparent harm. This uncertainty is not quite satisfactory, but there are points on which I do feel certain. First, that the aphid is not a pest of general origin or peculiar to the plants in a state of captivity, because I have frequently seen its roots newly collected in the Alps, and just when I am importing my usual supplies, and the pest is conspicuous on such species as *minuta carnolica*, *Wulfeniana*, *calycina*, *oenensis*, *venensis*, and *Dumoulini*. The more porous the rooting medium, the more liable the plants are to be infested. This brings me to another point, also, I think, beyond doubt, that the aphid cannot long exist if not near a circulation of air. The porous soil just hinted at is an instance. Another is the fact that you always find the densest colonies at the collar of the plant, and if deeper it is pretty sure to be in loose soil or *débris* as many of us have a fancy for setting the *Primula* species amongst. And again in the case of pot-cultivated specimens this is emphasised by the fact that there may be a colony at the collar and another at the bottom and near the hole of the pot. In stiff, adhesive soils you rarely find this pest, but, of course, if soils are not practicable for all the species. Given, however, the correctness of the air theory, if one wishes to destroy the pest, we have an obvious advantage in knowing such simple facts.

**Muhlenbeckia complexa.**—Properly planted, this is capable of growing to a most attractive specimen. On the outside of a greenhouse facing south it has grown into a wide mass and had a delicate and Fern-like effect. It acts as a foil to some *Tritomas*, and as such its distinct effect will be better imagined than described. It makes a striking hillock of sombre foliage when grown in a border or on rocks, or it may be employed as a cimber of considerable vigour. Of course, a position named is an exceptional one, and may be said to indicate the want of hardiness which I have found to be the case. My experience is that in severe winters it suffers in the open, but is killed. Anyhow, it is one of those good and effective things that are worth some care in winter, and often a small armful of dry Bracken will answer for protection in winter. I notice a crop of beautiful fruits setting on twigs that have rambed into the greenhouse. J. WOODVILLE.

Woodville, Kirkcubbin.

**Single Dahlia Scarlet Defiance.**—I have grown this Dahlia this season, and find it to be very vigorous, free-flowering variety, producing blooms of a most intense scarlet colour and extra large size. These are borne on very long stems and are just the thing for cutting. Given as all the types of Dahlias are for the flower garden, none are so useful for cutting as the single varieties. One mistake which is often made is placing too many in a single vase or bowl. A space of a few inches between each flower should always be given, thus allowing for the spare contribution of some suitably coloured autumn foliage.—J. C.

**Asclepias tuberosa.**—This fine plant, which was introduced from North America some three hundred years ago, has come before the flower committee of the Royal Horticultural Society two or three times this season in the hope it would obtain an award; but, good and valuable as it is, the limit of age was very properly applied in its case. It is a grand old plant, and the season appears to have suited it. The dry, warm sunning brought it to a high state of perfection. It needs a light warm soil to come to perfection, and this it is found to do well in a mixture of peat and loam. It is seldom met with, and that, perhaps, because conditions of soil and climate may affect it.—R.

## ANDROSACE LANUGINOSA.

the whole, this may be considered the best of its race. Left alone it is rather straggling in growth, but this may be considerably modified by regulating the shoots with a few wooden pegs, thus forming it into more compact masses. The majority of the species in this beautiful genus have a caespitose habit of growth, this leading to make them rather short-lived in our temperate climate. The plant under notice is an exception, being easily grown and readily propagated. The stems reach a length of about 2 feet and are furnished with silky white leaves, the flowers rose-coloured with a yellow centre. There should be no difficulty in forming large clumps, as in the illustration, preferably in positions where the trailing stems could fall over a ledge of rock. It will also do well on a level, but to be successful grown thus the ground should be carpeted with small stones for the growths to rest on. A soil composed of

years to perfection in heavy damp soil and in a shaded situation. In sun or shade, in light or heavy soil, cottagers seem rarely to fail with this exquisite Lily, and one is large-hearted enough to be glad of their success even if such does not attend one's own efforts. After reading the exhaustive and interesting article (p. 220) on the disease which has lately attacked the Japanese Lilies, one feels a strong desire that those who have worked so ably to elucidate that question would turn their attention to the disease, that so often works havoc in the ranks of *Lilium candidum*, which is *par excellence* our Lily, and yields the palm to none in pure beauty. Many reasons have been assigned for this visitation and many remedies have been recommended, but, as far as I know, all are more tentative than authoritative.—S. W. F.

**Seedling scarlet Lobelias.**—I send you a few side spikes of Lobelia seedlings having for parentage *L. syphilitica* and the forms of *L. fulgens*. The result of such hybridising is to give greater hardiness to the race, and it also tends to make them bushy. My large bed of

200 feet in length, which have lately been filled with double Violets. The plants were looking particularly strong and healthy, and on not one could a trace of red spider be seen, the foliage being of a uniform dark green throughout. These Violets were grown in the full sun, and no watering was required from the time they were planted out in the spring, while the heavy rains that fell immediately after they were moved to the pits settled them well in their new quarters and prevented them flagging even for an hour.—S. W. F., *South Devon*.

**Muhlenbeckia complexa.**—A note from Mr. Wood on the charming effect of the above associated with *Rhexia virginica* appeared on p. 159. It is, indeed, valuable for clothing blank or unsightly places; here hanging like a curtain before a bare rock; here filling the interstices of a worn-out hedge with its wiry stems and minute leaves, and here again acting as a foil to some brilliant flower. In my garden it has this year overgrown the corner of a bed where *Lobelia fulgens* lives, and a few brilliant spikes have shot up



*Androsace lanuginosa* at Totley Hall, Sheffield. From a photograph sent by Mr. W. A. Milner.

sandy loam with either peat or leaf soil added, and also some burnt clay, answers well for it. The illustration was from a photograph taken by Mr. Milner, Totley Hall, Sheffield, in his garden on July 29 of the present year. Mr. Milner says that the plant was given to him about three years ago, and that it seems to increase and be thoroughly at home. He also tells us he has never pinched it back, and that he grows it in a mixture of light soil and limestone chippings.

**The Madonna Lily.**—On page 159 reference is made to the healthy conditions of the above Lily in cottage gardens. The writer of the note is inclined to attribute this success to the sandy soil in which these bulbs were grown and to the high and sunny situation of the bed. The fact of these Lilies thriving nowhere as they do in cottage gardens has often been alluded to in the columns, but it is not alone in dry positions that they flourish in such gardens, for I know of more than one place where they have grown for

these has been quite a sight, being a mass of bloom. The plants were put out as miniature seedlings in the middle of a large field, with no protection whatever, in the early spring. I have other crosses, and for next year I hope to get a greater range of colour. The Gaillardias also are the result of careful hybridising in order to get a distinctiveness to the strain.—B. LADHAMS, *Shirley, Southampton*.

\*\* They are very interesting and such experiments may lead to some useful varieties, but we think that all crossing of *L. syphilitica* and the splendid scarlet kinds is a step the wrong way. What we ought to seek are fine varieties of the scarlet kinds, than which there are no better.—Ed.

**Violets.**—I see that on p. 190 "J. C." speaks of the present season as having been trying for the double Violets on account of the encouragement given by the drought to the red spider. Fortunately for us in the south-west, we have had a fairly moist summer, only one of the summer months being below the average as regards rainfall. I have just seen a range of pits, over

through its dark green maze. It must, I think, be judged perfectly hardy in the south-west, as one plant, which grows here at the lip of a small cascade and hangs down towards the water beneath, was in the severe winter of 1895 a solid sheet of ice for many weeks, from root to furthest leaflet, with the incessant sprinkling of the quickly freezing water. After the departure of the frost it looked very miserable for a time, but with the return of spring threw out fresh shoots and leaves.—S. W. F.

**Notes from Almondsbury.**—It is wonderful and delightful to notice the growth of the love of gardening and the rapid spread of flowers into small and out-of-the-way places. On Monday I was at Aust, one of the many places connected by tradition with the meeting between St. Augustine and the Welsh bishops. Just opposite the fine old church is a farmhouse, and the garden is full of white *Anemone japonica*. Yet it seems to me only a few years since the gardening world was rejoicing over the possession of this treasure. One day last week a lady, who had spent many hours in the study of gardening books, came

to me, and, though knowing very little as yet, was enthusiastic on the subject. Down in the village little greenhouses are madly springing up, and wild purchases at ruinous prices are made of bulbs that will never grow to perfection. One can often give here a helping hand. *Physalis Franchetti* is looking very fine. My advice is, give it a good place in the vegetable garden and grow it freely; it is a most excellent fruit. I think it superior to the ordinary Cape Gooseberry in flavour, and a dish full of these gorgeous monsters would delight the eye as well as the palate. Sun and rich soil are all it needs, and once planted, never think to be free of it. *Rudbeckia Golden Glow* is a fine thing, but mine went up to 9 feet high and then bloomed profusely. Put it with a *Silphium* and see which will beat. My hardy *Cyclamens* are over—how charming these are! A race of *Streptocarpus* from Messrs. Sanders is good, to my mind, but rather difficult to bloom. These things want heat, but not a stove. In the stove they come out waxy and lanky. Everyone should grow the tall *Tydeea fragrans*—pure white, long tube—most useful just now, yet I seldom see it.—C. O. MILES.

***Tropæolum speciosum*.**—This brilliant climber, a note on which appeared on page 189, is difficult to establish in the south-west. I have tried to introduce it into my garden for five years, and only succeeded in acclimatising it last year after four unsuccessful attempts. It is now growing in leaf-mould and loam in a bed which the sun's rays rarely touch, though, after the plant has reached a height of 5 feet it gets plenty of sunshine. It has flowered abundantly this year and has also seeded freely, yet in the summer great lengths died off suddenly without any apparent cause. As "E. J." pointed out, its vigour in Scotland is marvellous. No careful selection of site and exposure is needful there. It is almost sufficient to drop a piece of the root on a bed for it to occupy the whole of the surrounding soil in a year's time. I have seen barrowfuls of the roots dug up and thrown away in the north, with which we in the south would have been only too glad to experiment.—S., *Tarquay*.

#### BORDER CARNATIONS.

PERMIT me to make a few additions to what I said the other day, as I seem not to have made myself understood. No one has a greater appreciation of the excellent work Mr. Martin Smith has done in raising and giving us his beautiful and vigorous modern Carnations. What I did say, and say again, is that "no flower has been more killed by kindness," because the florists, in their search for smoothness of petal and symmetry of form, overlooked the cardinal points of vigour and hardness. To me—and I venture to think to most "picture-loving" gardeners—a bed of Carnations from last year's autumn layers is an unsightly thing, with its single-stemmed plants, probably stifflly tied up, and with a ring of cropeared layers around the central stick. What I must have is a fine bold mass, full of growth and flower, as little tied up as possible; for preference, not on the flat, but hanging down over a bank or a wall and covering it, perhaps for 4 feet or even 5 feet with a curtain of flower. Will anyone contend such an effect is possible with one-year-old plants? It certainly is not in the north, and therefore I only call such Carnations as will endure and thrive for three years at least true border Carnations, because they only can give the rich effect of luxuriance and flower that I desire. Those who have not seen the beauty of Carnations grown in this way have a treat before them if they will try it. I shall never forget a striking instance I saw years ago in a stable yard at Tarifa, in the south of Spain. Hung on the walls of the inn yard where the diligence stopped were large pockets of cork bark, filled with soil and planted with Carnations which hung down in a blaze of beauty. Such artistic stables do not, I think, reach as far north as England, but we certainly may diversify the usual Carnation bed of

an English garden by a raised bed of Carnations hanging down over Larch poles where the soil is sufficiently holding to grow Carnations really well. One of the many merits of Mr. M. Smith's Carnations is that their flowers are so bold and so large, that they are improved by being slightly smaller and so perhaps refined, while the gain in the mass and quantity is enormous. I mentioned one florist's Carnation as a type of what is unsuitable from my point of view; let me add another—Mrs. Eric Hamöro, which is so formal that it is to me positively ugly, and I have discarded it. No doubt it may be a first-rate florist's flower, but then I am not a florist.

EDWARD H. WOODALL.

***Zauschneria californica*.**—In my garden in South Devon this plant grows very freely in heavy loam, even in a spot which is not well drained. It is now bearing its brilliant vermilion blossoms, and is a pretty sight. It is quite hardy here and is given no protection during the winter, having borne the long cold of 1895 with impunity. A small root soon makes a large plant, and as it spreads abroad considerably, it is well not to plant any weak-growing subjects in close proximity. In some gardens it refuses altogether to thrive, although everything is done to humour it.—S. W. F.

**Dahlias and earwigs.**—The note on the above subject (p. 147) reminds me of a time, many years ago, when I planted out a new Dahlia in sunny weather and propped up an old sack over it by way of protection. The next morning I found, to my horror, that the leaves had been all but demolished, and on removing the sack, the better to examine the work of destruction, found it teeming with earwigs. At that time I was growing a few hundred *Chrysanthemum* plants for exhibition blooms, and had already lost many a promising shoot owing to the same pests. I trapped largely with inverted 2½-inch pots filled with hay, sections of hollow cane and crumpled up pieces of brown paper, but felt that the tale of the slain was too inconsiderable to cause any appreciable diminution in their numbers. The sack episode, however, seemed to point a method by which the enemy might be annihilated wholesale, and a search being made for every available piece of old sacking, some thirty or more were found. These were lightly folded and placed on the grass and around the *Chrysanthemums* and Dahlias before nightfall, and on examination the next morning were generally found to contain from a dozen to a hundred earwigs; on some occasions an even larger number than the last-named was trapped in a single sack. Towards the end of the summer the captives were fewer, and the following year the earwigs appeared in diminished numbers. A few weeks ago I was in a garden where a white ensign had inadvertently been left at the truck of a flagstaff through the night. As the proprietor wished to substitute another flag, I hauled down the ensign, and as it touched the ground I noticed that some fifty or more earwigs were running about over the bunting. The night having been absolutely calm they had taken advantage of the hanging folds of the flag for shelter.—S. W. F.

**Herbaceous Lobelias.**—I was glad to read on page 124 that a correspondent found herbaceous Lobelias perfectly hardy with him. That this is not the general experience may be inferred from the numerous letters that have appeared in THE GARDEN during the last few years, dealing with various methods of preserving these plants through the winter months. In my present garden, the soil of which is a heavy loam, both the dark and green leaved varieties are so hardy that, though I often divide the clumps in the autumn, I never have, as in "B. C.'s" case, to place a mulch over the divided plants. The chief group of these Lobelias is situated close to water, and in the severe frost of 1895 the freshly divided clumps were frozen solid for months, this garden, with its low-lying and water-surrounded position, being some degrees colder than any other in the neigh-

bourhood, yet not a single plant perished. The brilliantly coloured flower-spikes, some exceeding 4 feet in height, are thrown up in great profusion, and the other day I cut four dozen without their loss being noticeable. This year they are associated with *Salvia patens*, and very beautiful is the effect of the vermilion spires shooting up from the deep gentian-blue of the *Salvia Lobelia rosea* also does well, and has proved hardy under the same conditions during the last two winters; but whether it would withstand prolonged frost such as that of 1895, with impunity, remains to be proved. When I reside in a warmer and far more sheltered spot on the banks of the river Dart, where the soil was light and shady, I could never keep these Lobelias healthy in the open through the winter, and I had the greatest difficulty, though I wintered some frames and others potted up in gentle heat, preserving sufficient for a yearly display, would seem that, in a damp and holding soil to gain a hardiness to withstand disease and the clemency of wintry weather, that in a lighter soil and more genial surroundings they fail to acquire.—S. W. F.

#### NEW DAHLIAS.

AT the two exhibitions—the Crystal Palace and Aquarium—lately held, fresh varieties of Dahlias were numerous. This was more especially the case among the Cactus flowers. They were many cases improvements, too, both in shape and colour. There appeared to me, however, rather a tendency to award certificates to sorts of somewhat similar tint. Thus, shades of ruby-red were so honoured in Falka and Ruby. Now *Cycle* last year is perhaps better than either, and *Regulus* is not so fine a crimson as is *Chari Woodbridge*. To multiply varieties indefinitely is certainly not a gain unless distinct advance and I fear the cry will soon be with *Cactus Dahlias* as with *Chrysanthemums*, that we are getting too many.

One could wish for some means of judging a new flower in other respects besides the bloom itself. Thus, *Fantasy*, which struck one last year as absolutely new and out of the common shape, is a complete failure as a plant. Its blooms without severe disbudbing are tiny; they have footstalks so short that the leaves hide them entirely. Now one has to pay a considerable price for these novelties, and the many failures are disappointing. As seen at the shows,

**DAFFODIL** is quite ahead of any of its colour, and its shape is most perfect. It is of medium size and its petals are narrow, these standing out quill-like and graceful. The shade of yellow is also very pleasing.

**NIGHT**, as the name implies, is very dark, almost black. In shape it is an improvement on the variety called *Matchless*.

**TILLIE** is a charming shade of salmon-rose; its shape is of the approved type.

**ISLAND QUEEN** has a distinct shade of coral heliotrope-pink will describe it. It is free blooming and has long stems, and is sure to become esteemed.

**ALFRED VASEY**, salmon-rose, is a charming flower quite one of the best of the year. The tint is fresh and rich, and the shape most desirable.

**MARY SERVICE** is another exquisite flower in tint of salmon and pink. Its petals are narrow and pointed.

**ARACINE** will be grown because of its distinctive colouring—white and red. Its petals are very narrow and have a most pleasing curl.

**E. J. DEAL** has bright scarlet crimson flowers. These are forked or pointed and light in appearance.

**ANNIE TURNER** has a charming Cactus-like form and the shading of cerise is most distinct.

**TRUE FRIEND** is a dark-coloured taking bloom. Its petals are spiky and narrow. It is a distinct advance.

The above-named are all Cactus Dahlias. They appeared to me the best among others which gained certificates of merit. *Hypatia*, terra-cotta-yellow, and *Nellie Broomhead*, lilac, are two pompons of very pretty form and colour.—S.

**Physalis Franchetti.**—"F. W. B." (p. 17) notes how easily this is grown, though he admits

ere are failures. Last year I failed, not getting a dozen perfect fruits. This year, without any attention, I have a large quantity and of large size. I think last season the culture was at fault. I raised the plants in strong heat, finally cutting out at the end of May or early in June. The plants soon became infested with red spider, making but poor progress. Being on a Vine border I expected better things. This year the plants came up again very strongly, and instead of a few weakly plants I have grand bushes covered with fruit. This *Physalis* may be raised in a cold frame, and, given ample moisture, will grow freely. Treated thus there is no check. I have this season raised it by sowing in the open ground.—G. WYTHES.

ORCHARD AND FRUIT GARDEN.

BLACKBERRIES.

The accompanying illustration (from a photograph by Messrs. Scott and Sons, of Exeter) shows the value of the Blackberry for covering rustic garden arch. Not only is it effective in furnishing shade for a garden seat, but it breaks the monotony of a long wall-enclosed garden, and furnishes a considerable quantity of fruit of superior quality. The variety is *Alison, Jun.* The garden, belonging to Mr. Sargent, Prospect Park, Exeter, has a moderately favourable situation.

A. HOPE.

UNFRUITFUL PEACHES.

I have a lean-to Peach house having a west gable, the front is 4½ feet high, back wall 10 feet, with 9 feet. The south gable is of stone, and the house on that end is shaded by Beech and Ash trees which grow to within 10 yards or 12 yards. The rafters are 11 inches apart and 3½ inches deep under the glass. During the summer the sun does not begin to shine through till about 1 o'clock p.m. The trees grow in an inside border and are in splendid health. For the past two years they were covered with bloom in spring, but with the exception of four trees at the north end of the house they have quite failed to set a crop. They are not forced, there being no artificial heat. Could you suggest the possible cause of failure?—GARDENER.

\* The cause of failure is evident enough—immature wood. The house was badly designed at the wrong position for it chosen in the first instance. If a Peach house must face the south, as I often visit a garden where Peaches and Nectarines are successfully grown in a lean-to house facing the west, the least that could have been done would have been to construct a glazed south gable, to have light sash bars, these also serving the purpose of rafters, arranging them 15 inches to 18 inches apart, and to provide artificial heat. Even with these improvements it is doubtful if the shade of the Beech and Ash trees would still have an injurious effect upon the Peach trees at the south end of the house. Neither Beech, Elm, nor Ash trees are desirable adjuncts to a garden, and if "Gardener" can get permission, he ought to destroy those shading the Peach house under his charge. If he could further turn on fire-heat, that would partially compensate for the insufficiency of sunshine that reaches his trees. Seeing that they flower freely, root-lifting is not necessary, but he ought to do all the thinning out needed directly what fruit ripens is gathered. Freely thinning out, in particular removing much of the wood that has recently produced fruit, or which ought to have done so, gives the reserved young growths a better chance to harden, as they then get the full benefit of what little sunshine penetrates through the roof. Immature wood may flower freely, but the flowers are imperfect in form and feeble, few or no fruits resulting from them. Trees in pots

would do better under the conditions that prevail in "Gardener's" Peach house, as these after the first season rarely form soft growth, added to which they could be shifted to a sunny, open spot directly the crops are cleared off. Well-managed pot trees produce surprisingly heavy crops. W. I

**Fruit tree in plant house.**—I have a small span-roofed plant house, used in winter for *Cinerarias, &c.*, one end being a brick wall. In spring and summer there are *Pelargoniums* and *Begonias*. Would a Nectarine or a Fig do on the wall satisfactorily? What is the best practical book on fruit culture under glass and outside?—X. Y. Z.

\* \* \* In all probability the house runs from north to south and the wall is at the north end. This being so, either a Fig or Nectarine tree ought to succeed well against the wall. If a Fig tree is preferred, Brown Turkey is the variety to plant. Confine the roots in a border about 6 feet wide,

of a normal-sized Winter Nelis, but less russetty in the skin than that variety. How seldom one meets with Gansel's Bergamot nowadays; this, no doubt, being accounted for by the fact that it requires a good climate and warm soil to do it justice. It used to grow freely and fruit well at Rendlesham, in Suffolk, and I remember a capital tree on a south wall in Essex, worked on the Pear, as it is not naturally a robust grower.—J. C., Notts.

**Figs.**—Figs, especially the Brown Turkey, are abundant with me, and, though somewhat late, are now (the middle of September) ripening well; other sorts, though equally prolific, are not ripening at all well. The Fig is a very gross feeder; I feed mine (some two dozen trees, half of them standard, the other half trained on walls) with blood and fish manure, cow manure, and lime rubble from old buildings. The trees are cut round late in the autumn so as to keep the roots within bounds; manure is put into the trench,

and then a good coating of farmyard rotten manure as a mulching, on top of which a layer of sifted coal ashes is placed to exclude the frost during the winter. In the spring the coal ashes are removed, but the manure mulching is left and well saturated with strong liquid manure. No amount of frost seems to affect them. I never lose a tree from the effects of frost and have almost invariably good crops, especially with the Brown Turkey, which rarely or ever fails, and keeps me well provided with delicious fruit from August till November. I have given up growing the Brown Turkey under glass. True, it ripens earlier, but it is not nearly so prolific or the flavour, to my palate, so good as the outdoor grown fruit. Several of my trees are thirty years old. I prune the wall trees, but not the standards.—GWENT.

**Strawberry Loxford Hall Seedling.**—This, when well grown, excellent late Strawberry appears to be very popular in the eastern counties, judging from the large stock of runners I saw this autumn in the Norwich nurseries. Although, perhaps, not sufficiently prolific for planting in large breadths for market, it is when at home a grand variety for private use, and, when well ripened, of good flavour for a late Strawberry. It is of no use trying to grow it in gardens where the soil is light and hot, as red spider, which is particularly partial to it, is sure to infest the foliage badly. It requires a cool moist loam and liberal mulching.

I have had no experience with it on a north border where such sorts as Elton Pine, Frogmore Late Pine, and Helena Gloede do well, but on ordinary beds exposed to the sun I have had very large fruits, these ripening after all other sorts were past. The fruit is cockscomb-shaped, dark crimson, with prominent seeds.—GROWER.

**Growing Plums for market.**—As with most other things in the fruit and vegetable line, too many midseason varieties are grown and too few early and late kinds; consequently in most seasons there is a glut of such sorts as Victoria, which everybody grows on account of its productive character, as low as a penny a pound and two pounds for three-halfpence being sometimes accepted. Of early and late Plums, however, there is in most market towns a scarcity. Were growers to turn their attention to the production



The Blackberry on a trellis in Mr. Sargent's garden at Prospect Park, Exeter. From a photograph sent by Mr. A. Hope.

narrower if the wall is not more than 10 feet high at its highest point, and a mixture of fresh loam, garden soil and old mortar rubbish in equal parts would answer well. If an early Nectarine is desired, Rivers' Early can be recommended. Humboldt is a fine midseason Nectarine. For Nectarines use less mortar rubbish. "Fruit Culture for Amateurs," by Mr. S. T. Wright, would prove of good service to you.—ED.

**Pear Bergamote d'Esperen.**—This, one of the freest bearers of the Bergamot section, is worthy of more extended cultivation, as quite young trees worked on the Quince fruit freely. In this district it does well, and in fairly sunny seasons is juicy and refreshing, being apt to show a slight grittiness near the core after a wet, sunless summer and autumn. I have it in upright cordon form both on an east and west aspect, and it does well, the fruit being about the size

of August and October ripening varieties they would doubtless find it remunerative, particularly in seasons when Plums are plentiful. Early Prolific, Prince of Wales and Orleans would be good Plums to grow for early supplies. The Sultan, an improved Prince of Wales and a very free bearer, might also be included, also Oullin's Golden, a large, oval, rich yellow Plum, ripening in August. July Green Gage, Early Transparent Gage, Mitchelson's, Monarch, two fine dark very prolific Plums; Grand Duke, ripening in October; Belle de Septembre and Winesour, the latest of all Plums, would be a good selection for producing late market supplies.—J. C.

#### PREPARATIONS FOR PLANTING.

ALTHOUGH it is too soon for planting, when the trees have to be procured from a distance, yet much may be done in the interval to forward matters. The foremost and most laborious work is the opening of the holes and getting them ready for the trees, particularly when a great deal of planting is contemplated. There is a great advantage gained by getting this done early, as not only does it save time when the actual planting has to be performed, but the excavated soil will become warmed by the sun's rays, and the mass and the sides of the holes will also become sweetened in the meantime. The soil thrown out in the process of digging becomes disintegrated on the outside, if not throughout the whole mass, and, as every planter knows, these finer particles are of the greatest value for placing directly over the roots, as they fill up all the interstices between them and leave no hollow spaces, as is the case when freshly-dug soils of an adhesive nature have to be dealt with. In some gardens it is necessary to concrete the bottoms of the holes where the subsoil is cold and wet, or where it is apt to be charged with water at certain seasons of the year, and when this has to be done it is almost superfluous to add that it should be done in good time. In this case short drains must be provided for carrying the moisture away from these concreted holes to the nearest existing drain, but if there are many holes—and they should be contiguous to one another—the quickest way would be to lay a drain purposely, and in such a manner that it will collect all the moisture from each hole. This drain should have a good fall, and be laid just below the level of the concrete floor to ensure the latter always keeping dry, and if placed just at the outer edge of the concreting with some rubble placed on top, the necessity for short drains will be obviated. In cases where the soil is merely cold and damp through the situation being low, the difficulty, and likewise expense, of concreting may be got over by putting a good layer of brickbats or stones at the bottoms of the holes, with a thin layer of broken metal on the top. This will ensure the roots of the trees lying much warmer, and often leads to their succeeding when they would otherwise be quite a failure. When this method is adopted, the precaution should always be taken to place either a layer of turves over the drainage or a sufficient quantity of long litter to keep the soil from getting amongst it and choking it up. For orchard planting the site should be thoroughly and systematically drained if the situation is a low-lying one and the subsoil cold and apt to become water-logged, for to plant fruit trees in such a soil without draining it is simply courting failure. Draining is of course best done, when convenient, early in the season, so that the disturbed portions of the field or pasture, as the case may be, have time to settle down before planting is done. But matters of this description cannot always be performed just at the right moment, and if undertaken at once a great deal of this kind of work could be done between now and the time that nurserymen would be in a position to commence lifting their trees. Another method of overcoming the difficulty of dealing with heavy retentive soils is to plant on mounds or stations. This is of course less expensive than draining, but the latter is the more lasting and

effectual remedy, and should always if possible be adopted. Of course there are numerous cases where no drainage of any description is needed, the subsoil being so porous that all superabundant moisture passes away readily, and all that is necessary in dealing with these is simply to open out holes of sufficient diameter and depth. Where a considerable sized tract of land is to be converted into a mixed orchard or fruit farm, the soil should either be trenched two spits deep or otherwise deeply ploughed after the draining is completed. Unless this can be done early in the autumn it is best to defer planting until the following season, taking a crop of Potatoes from the land in the meantime, after which the soil would be in good working condition. The diameter of the holes will vary according to the class of tree to be planted, but, as a rule, they should not be less than 4 feet, but in orchards 6 feet is none too much, and every particle of old roots should be picked out of the soil if the new tree has to occupy the same site that the old or dead one did. In forming an orchard the soil for which has been trenched, holes 4 feet in diameter and from 18 inches to 2 feet in depth will suffice, but if the trees are to be planted on grass or arable land which has received no previous preparation whatever, the diameter of the holes should certainly not be less than 6 feet, 2 feet in depth, and the bottom well broken up in addition. If this little extra trouble were only taken instead of merely digging a hole just large enough to hold the roots, and sometimes barely that, so many stunted, half-starved-looking young trees would not so frequently be seen in orchards. The next question is that of

#### SOIL,

of which a little should be spared for placing over the roots when the staple is of a poor description. In gardens the soil in which Melons or Cucumbers have been grown answers well if maiden loam is too precious, an article to use first hand. With this may be mixed turf parings from walks and drives, trimmings from the sides of roads, road scrapings, wood ashes, and burnt soil, and when the whole is mixed together it will form a compost congenial to the wants of any kind of fruit tree. The same kind of compost, even if minus the loam, answers remarkably well for placing about the roots when planting orchards, and when much planting is contemplated, a good heap should be got together and turned once or twice some time previous to its being required. Road scrapings, ditch cleanings, and trimmings from the edges of roads can generally be had for the hauling in country districts, and when thrown together and a little lime added at the time of turning, to sweeten the mass, a valuable compost is soon formed. Hedge trimmings, if collected and taken to where the compost heap is being formed and burnt on the spot, will supply a crude form of potash, and this should be intimately mixed with the other ingredients. By exercising a little care and forethought in this way a valuable heap of compost is soon formed, and the labour and expense entailed thereby are amply compensated for in the fact that the trees become the more quickly established, and as a result commence bearing sooner. Whether required in the garden or orchard, this soil should be either wheeled or carted and a sufficient quantity of it placed ready for use by the side of each hole. This should be done as early in the autumn as convenient, for, generally speaking, the ground is then firmer and the wheeling or carting can be done with greater facility than after it becomes saturated by autumn rains.

In addition to preparing the holes and placing a fair medium of compost when required by the side of each, there is the question of

#### STAKING,

as each tree, particularly standards, after being planted must be kept firmly in place by being tied to a stout stake. Staking should be well done at the outset, for if the tree once gets loose at the surface of the ground and a funnel-shaped cavity is formed, in consequence of the stem waving back-

wards and forwards through the action of the wind it will never do much good afterwards. In staking extra care is needed in staking, for the reason that the roots being on a level with the surface, or only a little below it, they have not a firm hold as when planted in the ordinary way consequently, winds have a greater power over them. The stakes in all instances should be driven firmly into the subsoil, and this is best done before the trees are planted, and then no mutilation of roots will take place, as is likely to occur when staking is done after planting. The requisite number of stakes had therefore better be prepared and to render them more durable the butt end after being sharpened, should be charred and then dipped in gas tar, or otherwise be boiled for a few hours in creosote. As a protection against ground game, galvanised wire mesh netting forms a cheap and effective guard for the trees. For this, the light stakes are needed to tie the wire to, and these should be placed triangular fashion round and at some little distance from the stems. The wire netting should be let into the ground to a depth of 2 inches or 3 inches. This same netting makes a good cattle guard if stout and long stakes are used, reaching well up to the heads of the trees. The end corner of the netting should be let into the ground and then wind it round the stakes in spiral fashion until the top of the stake is reached. It should then be cut across, which will leave the netting in the right form for letting into the ground and winding round the stake placed about the next tree. The netting should be held in place with a single strand of barbed wire fastened to one of the stakes near the ground, which should take the same course as the netting does, and fasten it at the top to one of the stakes with a staple. After finding how much wire and netting are required for one tree the necessary number of lengths of both can be cut and had in readiness for use. This is the most inexpensive form of guard for fruit trees that I am acquainted with, and it has the additional merit of being very durable. A. W.

**Japanese Wineberry.**—I was glad to read a note from "Grower" (p. 229) in praise of *Rubus phoenicolasius*. Here it has fruited abundantly this season. As "Grower" says, it makes a very palatable preserve. It is also useful for tea and when fully ripe is a pleasant dessert fruit. In 1896, owing to the abundantly dry spring and summer, the berries were small and comparatively tasteless, but this year they plumped up well and were more than double the size of those borne in the preceding season. If this Wineberry were valued less from an economical point of view, it would still be worthy of a place in the garden for its ornamental qualities.—S. W. F., *Torquay*.

**Wasps' nests.**—The hopes of gardeners in this locality in early summer that wasps would give them no trouble this season have not been fully realised. Up to the middle of August, half-a-dozen wasps had been seen in this district, and one would have thought that the copious cold rains we have had since that date would have done away with them. For the last fortnight, however, the pests have come in upon us in great numbers, attacking not only Grapes, but also Pears and Apples also. The fact is, the cold weather of May kept the nests backward, and of small size of the wasps proves. Another point that climatic influences have much to do with is forwardness and numbers of wasps is found in fact that in Norfolk and Suffolk the pests were this season fairly numerous by the middle of August. Fixing tiffany over ventilators in the old-fashioned way incurs much labour, but the contents of a bottle of Davis's wasp destroyer poured over some damaged fruit—this being kept out of the reach of anyone—seems to clear them off in short time.—C. C. H., *Notts*.

**Pears Beurre d'Aremberg and B. Stermans.**—In answer to Mr. B. Addy's query respecting these two Pears, Beurre d'Aremberg is a success on the Pear stock, either as a bush in the open or as a cordon on a west wall. With

the fruit ripens satisfactorily, the flavour is excellent, closely approaching that of Winter Nelis, while its cropping leaves nothing to be desired. Consider it an excellent Winter Pear, and should be like to be without it, as it comes in so useful after Glou Moreceau. Moreover, it is a Pear which remains in good condition for some days after having arrived at maturity, and it does not rot at the core. The individual fruits are large enough for table or ordinary use. The same variety is quite as satisfactory when worked on the Quince stock. I wish I could give Mr. Adley a good account of B. Sterckmans. This I consider to be but a second-rate Pear, and do not think it worth growing, and have discarded it some time since. It is a good cropper, but I never knew it to ripen properly; in fact, it was only fit for stewing. I have seen it classed among Pears possessing a melting flesh, but my experience of it is quite the contrary. On some it may be a success, but I have never yet met with it in first-rate condition.—A. W., Hereford.

#### CUTTING OFF VINE LEAVES.

Is it injurious to the Vine to cut off part of the shoot with the Grapes? Is it bad for the future of the Vine to pull off for the table some six or eight leaves daily during the period that the Grapes are being cut down?—INQUIRER.

\* An early and excessive removal of the first-formed leaves must, to a certain extent, prove injurious to the Vines. All the while the leaves remain healthy they are performing their natural functions. After the wood is matured, buds formed, and crops ripened, the storing up of sap is still going on, while the roots are particularly active just before the fall of the leaf. It follows that a wholesale loss or destruction of large must paralyse the action of the roots and do bad for the future of the Vine. When this question cropped up some six years ago, I closely observed the behaviour of Vines that had been rather hardly used in the direction of early and severe removal of leaves. The crop was nearly marketed, and for several reasons bunches of Grapes that are sent to the market must be cut with wood attached, this meaning shortening the bunch-bearing laterals to near the third or fourth joint. All the laterals were at the winter pruning shortened back to either the first, second, or third bud from the old wood. Only a few long spurs or with three buds showing were left, and these by way of experiment, and any laterals that had not been allowed to bear a bunch, also a few that had not been shortened when the bunches they bore were cut were with the majority rather badly pruned, one, or at the most two, buds showing on the spurs formed. The results were somewhat strange. We will take the spurs where the laterals had been early shortened when the bunches were cut. Where only a single, plainly discernible bud was left the break was weak, and the laterals gave either a small bunch or none at all. The spur with two buds on it broke more strongly, and none of the laterals failed to give serviceable bunches, while those shortened to the third or fourth joint more plump buds broke the most satisfactorily, and would each have produced two bunches if permitted. In the case of laterals that had produced bunches, and which were not shortened when these were cut, these, when hard pruned, all broke moderately strongly or better than their neighbours which had been less severely dealt with when the bunches were removed, and each gave a bunch weighing about one pound. Those shortened to the second and third buds, as might be expected, did even better, and the greater number of finer bunches resulted from the growths springing from the spurs left when pruning the laterals that carried no bunches the previous year. This points rather conclusively, I think, to the fact that premature and severe shortening of the laterals should be avoided if possible, though it does not follow that the Vines are irreparably injured by this early pruning.

Last season I once more took note of the consequences of early shortening of laterals, and also of pruning in relation to over-cropping. The variety was Gros Colman, and a bunch had been produced by nearly every lateral. Many of the bunches were cut with wood attached late in September, or while yet the foliage was comparatively green, and if at the winter pruning these quite young vines had been hard pruned, or the spurs shortened to the first or even second bud, the crops this season would have been thin and the bunches small. Luckily many of the laterals were shortened to the third bud from the old wood, and these turned what might have been a failure into a creditable success. The moral of this is: Never resort to hard pruning in the case of vines very heavily cropped during the previous season; the same rule holding good, though in a less degree, in the case of vines that had much of their best foliage removed with the bunches.

Personally, I would rather not gather many leaves from my Vines, but then I do not leave so many on them as do some growers. In my case the greatest value is attached to the primary leaves, and of these, two, or at the most three, beyond the bunches are considered ample, all lateral growths not carrying bunches being stopped at about the same length. The sub-laterals are usually strong and are kept stopped at the first leaf. But for their acting as so many safety valves they would be dispensed with altogether. As it is, they are preserved because they serve as outlets for superfluous vigour, and if they were removed early, the new buds on the laterals would burst into growth. I never hesitate about gathering these secondary leaves, but should not think of pulling off the primary ones. "Inquirer" may safely gather leaves freely from all superfluous or sub-lateral growths, the value of which so many gardeners over-rate, but if Vine leaves must be forthcoming for the dessert, why not grow a hardy Vine against a wall or shed for supplying them? W. BURGLEN.

**Pear Triomphe de Vienne.**—This handsome richly-flavoured Pear is becoming very popular, and will no doubt be planted by many in place of Williams' Bon Chrétien, as the musky flavour so characteristic of this is objected to by many people. Not only is the fruit of Triomphe de Vienne handsome and of excellent flavour for an autumn Pear, but the tree is an early and very free bearer, the fruit keeping some time in good condition if stood in a cool place. It appears to be at home in the midlands, as at the Derby show last year it turned up in several collections of fruit, and in the class for a single dish of Pears was awarded the first prize, the fruit in each exhibit being large, tapering and very handsome. It is in season during September.—C. C. H.

**Pear Souvenir du Congrès.**—I am surprised, in walking round gardens noted for fine Pears, that in many of them the above kind has not yet a place. Too many of that bad-keeping variety, Williams' Bon Chrétien are planted. Souvenir du Congrès is a seedling from the foregoing variety. The fruit is larger, sometimes enormous, from wall or espalier, and does not decay so quickly after gathering. Fruit of Williams' Bon Chrétien grown in midland gardens, is poor in quality as compared with those fruit trees in the south of England. Souvenir du Congrès has much more juice in it, and the tree is hardy and usually sets a good crop of fruit even in unfavourable springs. During the past few years a great many trees of it have been planted in Kent and Sussex for market.—J. C.

**Plum Stint.**—At p. 185, in an interesting note on Plums, "E. B. C." asks what is the difference between Stint and River's Early Favourite. Stint is a small fruit reddish in colour; indeed, my fruit may be termed marbled with red on a greenish-yellow ground, whereas Early Favourite is rounder, of a purple colour, a freestone, and with me ten days earlier than Stint. Both are excellent early varieties. Of Early Favourite there is a grand tree in the Royal Horticultural

Society's Gardens, Chiswick, which I notice always crops freely. Stint is equally prolific, as even in adverse seasons it fruits freely. Some growers may object to Stint on account of its being a small fruit, but its earliness is a gain, and it is of good quality for an early Plum. This variety will fruit freely on a light soil where others fail. My soil is very similar to that of "E. B. C." I get my best crops from cordon trees given a little freedom in side shoots.—G. W.

**Cordon Plums.** I was specially interested in "A. W.'s" practical note on the above (p. 193), as a few years ago I adopted this mode of culture. Having a very light soil I made a narrow border, giving 2 feet of heavier soil, planting cordon trees. From these I get the best fruits and regular crops. I am obliged to vary my treatment in the case of certain varieties, and here, I fear, it cannot strictly be termed cordon growth, as I allow the trees to make a few inches of side growth. By this means more young wood is secured and a certain amount of older wood may be cut out annually. I found by adopting a rigid cordon growth some kinds failed to crop, and by giving a little more freedom at the sides I get a good return. I do not encourage breast wood. In such soil as mine certain varieties when young make far too much growth trained as fan-shaped trees, and are poor croppers. Here, I think, the cordon system is of great advantage. In many cases the Plum is so gross that it needs different culture. In my opinion the wood should be trained nearly horizontally when the trees are young.—G. WYTHES.

**Apple Waltham Abbey Seedling.**—This Apple betrays its parentage by its colour, which, if a trifle paler, is yet sufficiently golden to at once suggest that it must have originated from Golden Noble, which is really the case. It has not quite such a clear skin as the parent, the small pale russet dots with which the surface is marked showing out rather conspicuously, and in exposed situations the fruits sometimes become marked with patches of russet. As a garden tree the fruits are clean-looking and quite free from blemishes, and then the fruit equals Golden Noble in its handsome appearance. The fruits are very evenly formed, and the stalk, which is rather short for so large a fruit, is inserted in a rather deep basin. When cut open the flesh is found to have a yellowish tint, much resembling a well-ripened specimen of Wormsley Grange Pippin, while it is tender, juicy, sugary, and pleasantly flavoured. It is a capital cooking Apple, and one that requires but a small amount of sugar. Its season is from September until the end of the year. The tree makes a capital bush or pyramid and is very prolific. Both growth and foliage are quite distinct, the former being of medium strength while the leaves are small. Altogether it is a very desirable Apple, and intending planters would do well to make a note of it.—A. W.

**Apple Golden Russet.**—This fine old-fashioned English Apple is seldom met with now unless it is in old orchards. This is a pity, for when well grown and thoroughly ripened it is hard to beat for flavour. I came across a fine old standard tree a few years ago, growing in the dividing hedge between two orchards, and the fruits were the finest, best coloured and the highest flavoured ever seen or tasted. On making inquiry I found the tree to be of great age, it having been planted in all probability early in the present century. It was noted for its bearing continuous and heavy crops of fruit. When last passing that way I found the old tree was gone, whether it had blown down or not I cannot say, but most likely this was the cause of its disappearance, as many other fine old trees in the adjoining orchard seemed to have met with the same fate. Golden Russet is not a large Apple, the skin yellow, thick, and irregularly coated with russet, the more shaded the fruits the more dense is the russet. Where the fruits experience full sunshine the skin is much clearer, and they then take on a beautiful colour. The flesh is yellowish, firm, sugary and highly flavoured. It is a fine keeper and can be had in good condition as late

as April; in fact, should not be sent to table until after Christmas. The tree is a healthy, vigorous grower and suitable either for garden or orchard culture.—A. W.

## CHRYSANTHEMUMS.

### THE GROWTH OF CHRYSANTHEMUM PLANTS.

THE sole object of the exhibitor is to obtain fine well-developed blooms, and the habit of growth of any particular kind, if its flowers can be produced to win prizes, is of secondary importance, but to the general grower, and especially to the amateur, the height a sort will grow to is a consideration. A. H. Fewkes is a variety of model growth; it is dwarf, that is about a yard in height if cultivated for large blooms, and has plenty of well-shaped and closely-grown foliage. Australian Gold is a capital grower; so, too, is the old variety Avalanche. Col. W. B. Smith, Commandant Blussett, and Dorothy Seward are all of sturdy habit, but the last-named must be topped in the spring if more than one large flower on a plant is desired. G. C. Schwabe, Geo. Seward, Golden Gate, John Neville, Kentish White, Lady E. Saunders, L'Emindra, Louise, Mme. Ad. Chatin, Mme. E. Capitant, Mme. Gustave Henry, and Mlle. Marie Hoste are all first-rate in the matter of growth. So is Mlle. Thérèse Rey, but this has of late years exhibited a tendency to produce bloom-buds that will not swell, a habit which will soon cause it to be discarded, for, however fine the bloom, uncertainty is disappointing. Miss Elsie Teichmann is a sort not unlike the above, and may be grown in place of it. Mr. A. G. Hubback has a capital habit combined with good flowers. Mrs. H. Weeks, too, has growth of the right kind if the plant be topped in spring, as it must be to give more than a single large bloom to a plant. Mrs. J. Lewis is a new white variety that will be prized for its growth as well as its flowers. Mrs. J. Shrimpton, treated as advised in the case of Mrs. H. Weeks, has a most desirable dwarf and well-foliated growth. M. Edouard Andre is a particularly sturdy grower; so, too, is Modesto, one of the best of Chrysanthemums. Mutual Friend produces splendid blossoms on plants about 3 feet high. Nyanza bears fine crimson blooms and has the best of growth. It would be difficult to find habit and flower combined finer than the newer variety Oceana gives, and Phœbus is perfect in every respect. Pride of Madford, Pride of Exmouth and Pride of Swanley are all excellent growers of a dwarf nature. Nor must I forget M. Chenon de Léché, perhaps the dwarfest of all, which produces large blooms. Surprise is a newer kind with nice growth. Souvenir de Petite Anie is well known as a variety with an excellent habit. Viviani Morel and its sport, Charles Davis, are also first-rate. Wm. Tricker and W. H. Lincoln are also of capital growth, but not so highly esteemed as formerly for show. They must, however, still be grown for other purposes, the last-named being one of the very best yellow sorts for a late supply of bloom.

That splendid white Chrysanthemum Mme. Carnot as a plant is not pleasing. It is tall, and few can cultivate it throughout a season without its foliage becoming spotted and yellow. Australia grows to a great height. I have this year cut down the plants of this, and the buds look promising on specimens 4 feet high. Edith Tabor, grandest of yellows, has an ungainly habit; the leaves are far apart and the blooms come in an irregular manner. Eva Knowles, Graphic, Mme. Marius Ricoud, Mlle. A. de Galbert, Miss D. Shea, and Mrs. W. H. Lees are fine kinds that run up too tall to make comely plants. Western King, among newer kinds, has first-rate growth, sturdy and strong. This is likely to become a most popular variety, probably surpassing the fine white Niveum. Mme. E. Roger, a rare novelty, with green-tinted blooms, is a

splendid habited plant, and others of M. Calvat's later sorts, notably one called N.C.S. Jubilee, Mlle. Laurence Zede and Mlle. Lucie Faure, leave little to be desired in respect of growth.

H. S.

### CHRYSANTHEMUM NOTES.

#### TREATMENT WHEN UNDER GLASS.

FAILURES often occur just before flowering through faulty management of the greenhouses in which the Chrysanthemums are placed. If, for example, air be not admitted in abundance, the tops of the plants will run up spindly and soft and the flowers resulting will be wanting in substance. A like growth follows when the buds are a long distance from the glass. It is wise, therefore, to raise the plants to get them up to the light when the flowers are expanding. When first housed, doors and top and front ventilators should be kept wide open night and day. During bright sunshine, when evaporation is so rapid, I find that good results are obtained by damping the floors, and even syringing among the foliage, if the position of the house, such as a lean-to, is particularly hot. This damping is done in preference to giving much water at the roots, at least for a few days. It is well also to withhold manure for a week or so, the object being to keep the plants quiet, as it were, until they have recovered through the changed conditions from the moist and cool open air. Fumigating the houses once or twice is advisable, whether or not green-fly is seen. If this is not done at first this pest is almost sure to come in great numbers later on, when fire-heat must be applied. A safe and effectual method of fumigating is to use the XL All Vaporiser. It does not hurt the most tender leaves and is easily managed. The old practice of employing tobacco, or tobacco rag or paper, is decidedly clumsy compared with this later invention. I think the blooms of Chrysanthemums are the better for a slight shade. This should be put on at the first opening of the florets. Blinds which roll up and down at will are much better than fixed shadings, such as painting the glass, because light apart from bright sunshine is desirable. A temporary shade may be provided for the few blooms that always open before the bulk, so that the latter may have the advantage of full light whilst the buds are yet swelling. Less air may reach the blooms as they open. The florets are easily cramped and spoiled by cold draughts; ventilation at this stage should therefore be guided by the front lights. A little top air should always be allowed, and as the danger from frost and damp becomes apparent, fire-heat may be applied in such quantity as to keep a dry and pleasant atmosphere. For example, I do not like to notice the pots damp or the leaves moist the first thing in the morning. This tells me that not enough heat has been given at night to dry up condensed moisture. This latter is sure to settle on the blooms and cause decay. A temperature much over 50° is not beneficial to the Chrysanthemum. Some of the Japanese kinds—especially when early buds have been retained—require more heat perhaps to open them properly, but this heat is given at the expense of substance and colour. Incurved kinds open much more satisfactorily in a temperature just warm enough to expel damp. Fire-heat tends to make the florets so thin that they reflex instead of turn inwards, thus failing in the more important quality.

Some little may be done in assisting the opening blooms. The curling and curiously arranged florets of many of the Japanese cling together; if parted when opening there is a gain in form. As they are developing, again, the incurving varieties may be assisted. A short or damaged petal can be pulled out, which would otherwise block the way for a perfect one. This, in fact, is the best time to "dress" the blooms, as it is called. Attention in this direction must, however, be constant. I would go over the blooms every day or two. The labour

is necessary and repaid if exhibiting be an object. All decaying foliage should be removed. Yellow bottom leaves do not add to the beauty of plant. Side shoots usually come in all directions after the plants are under glass. These may be removed; they must rob the blossoms if left. Stimulants, which were withheld at first, should be given until the flowers are nearly open. When in good health, roots are seen running over the surface of the soil in the pots. Encourage them by every means. Weak doses of liquid manure and small quantities of fertilisers in the concentrated state will do this, but strong quantities will kill them. Quite recently I have seen a striking instance of this. A lot of exceptionally well-grown Chrysanthemums has been almost ruined by one application of nitrate of soda. It was sprinkled over the surface of the soil during showery weather. The leaves, which were of healthy green, gradually assumed a sickly yellow hue, and the flower buds remained stationary. All the small roots were burnt. The late strength of these plants will enable them to recover slightly, but with far different results the shape of blossoms that would have been secured had all gone well. Nitrate of soda and sulphate of ammonia require most careful handling. They are effective in pushing growth and giving brilliancy of colour to the flowers, but I never either above the strength of an ounce to ten gallons of water. Damping of the blossoms gives trouble to many. Some sorts, notably Mlle. Marie Hoste, Mutual Friend, Col. W. B. Smith and the very dark-coloured varieties are liable to such decay as they open. Very bad cases, I am certain, are caused by the plants being overgrown. The stems, which may look pleasing to the eye, become stout, are often hollow in centre, and the promising buds fail when they have arrived at a certain point. We rarely notice damping when Chrysanthemums are grown of than for huge blooms.

If the precautions noted in this article be followed, a satisfactory finish should be the reward of a year's labour, but gross unripened wood never yet produced handsome blooms. H. S.

## GARDEN FLORA.

### PLATE 1138.

#### THE CROWFOOTS.

(WITH A COLOURED PLATE OF *RANUNCULUS CARPATICUS*.)

THE Ranunculus, or Crowfoot, family is an important one in the hardy plant garden. Large and extensive as the genus undoubtedly is, the number of really good species that are worthy of being included in a selection is comparatively few. These, happily, are in many instances not only of easy culture, but may be beautiful when seen in good condition on the richer soils of our lowland gardens, whatever the altitude at which many of the choicest of the alpine forms grow—those that struggle for existence on the very verge of perpetual snows, scarcely any that I can call to mind have been in any way difficult to grow either in pots or in the rock garden where suitable positions and soil can be afforded them. I will refer to their culture in the enumeration of the species themselves. In place of the usual alphabetical arrangement of the kinds I have roughly grouped them as follows: (1) alpine forms, (2) herbaceous, (3) moisture-loving, and (4) florists' kinds. For the first of these the first group here given is not only numerous, but a very beautiful one, many of them worthy of every care as being among the most lovely of mountain plants, and forming

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.



RANUNCULUS ACRIS



their native haunts a veritable carpet of glistening white and yellow cups, so abundantly do their flowers appear. If less numerous, the second group yet contains several really good and first-class kinds; while the third, also small numerically, yet contains sufficient good kinds to render the moister spots of our gardens, as also the margin of lake and pond alike interesting. The last group, though not so much grown as formerly, is well worth attention from the great variety therein contained.

#### ALPINE SPECIES.

I have arranged under this head in alphabetical order the best of the true alpine species, a large number of which, by their dwarf stature as well as freedom of flowering, are especially fitted for the rock garden. It is, however, worthy of remark that, notwithstanding so large a number of the true alpine species are in their native mountain homes very dwarf, given liberal culture and deeper soils, not a few kinds grow to a much larger size and produce larger blossoms in many instances. This is, however, only achieved when planted out. I have grown many of the true alpine species in rich soils similar to those used for *Chrysanthemums*, and with only sufficient grit to keep the whole open. If freely grouped in good deep soil, light, gritty, and rich for the most part, it is surprising what beautiful results can be obtained. Many of the kinds are essentially adapted for grouping in this way, and being easily divided in some cases, and in others easily raised from seeds, advantage should be taken of this fact.

*RANUNCULUS ALPESTRIS*.—Is a true alpine of from 4 inches to 6 inches high. In its native mountain home this species is usually found in a calcareous soil, though this is not an absolute necessity under cultivation. Indeed, many of these dwarf alpine forms may be grown and flowered well in cocoanut fibre rather tightly placed in boxes or pots, a fact alone that at once removes the notion that for years prevailed, that the soils of their native mountain regions should be closely imitated. Now, however, the notion is fairly well exploded, and scores of the choicest alpinists may be grown with as much success in a border of well-prepared soil as in the most elaborate combination. The pure white flowers of this species are large, and with a conspicuous cluster of yellow stamens in the centre. Usually the flowers are produced singly. With a fair amount of moisture in the season of growth, and planted in loam, peat, and leaf-soil with grit, this species is a success. The rock garden is the best place for it, where it flowers in the early part of June. It is a native of the Pyrenees and other parts.

*R. AMPLEXICAULIS*.—This may be regarded as one of the best of the whole genus, and happily one of the easiest to cultivate. In soil that is deep and rich the plant will attain to nearly a foot high. A prevailing idea with many is that for mountain plants the merest scrap of earth is sufficient, the cultivator too frequently ignoring the fact that these alpine gems often send their root fibres to great depths in rocky crevices where drought is quite unknown. Planted in the drier parts of the rock garden, the plant is never seen at its best. The pure white glistening blossoms, each an inch or more across, are borne on the branching stems, and these in company with the greyish tint of the leaves are very pleasing. Moisture, or a good depth of soil, must be assured for this plant, which is freely distributed through the Alps of Europe, Provence, the Pennines, Ireland, the mountains of Leon, Spain, always in high, moist, rocky situations.

*R. ANEMONOIDES*.—Another true alpine, frequently not more than 3 inches high, though occasionally when well grown it may be seen double this height. This species is of more delicate and frail growth than many, and for this reason deserves to be treated somewhat specially.

Once established, it is one of the most charming of all alpinists. What it appears to love best is a deep fissure of gritty loam, leaf soil, and peat. Species such as this are assisted by being placed in contact with pieces of sandstone just below the surface. An exquisite mixture is the lovely white and rose-pink blossoms, and when a nice tuft has been formed it constitutes one of the choicest bits of any rock garden flora.

*R. CARPATICUS*.—This is the beautiful and showy species to which prominence is given to-day in the accompanying coloured plate. This mountain Buttercup is a free-growing kind with large blossoms  $1\frac{1}{2}$  inches across that are borne singly on rather leafy stems about 12 inches or 15 inches high. The species is, I believe, by no means common or even frequent in cultivation, though it is likely to prove a most desirable kind and a free and easy grower withal. In the nearly pedate and deeply notched radical leaves it is quite distinct, as it is again in the short rhizomatous or creeping rootstock. The plant succeeds perfectly well in a rather rich and moist loamy soil, and begins to flower quite early in April.

*R. CRENATUS*.—A very pretty and charming kind with pure white blossoms not unlike those of *R. alpestris*, but differing from that species in the crenate petals and also the scape, which is always one-flowered. It is a native of moist positions in the mountains of Hungary, flowering from June to the end of July, and grows about 6 inches high.

*R. GLACIALIS*.—This is about 4 inches high, having fleshy, dark green leaves, the upper ones covered with soft hairs, while the calyx is exceedingly hairy. The flowers are of a reddish hue and suffused with purple. This species does best in the higher parts of the rock garden in loamy soil, but rejoices in plenty of moisture during summer; but while inhabiting the highest mountain ranges it is quite possible that under cultivation in the lowlands quite moist spots would suit it best.

*R. GRAMINEUS*.—Though scarcely an alpine in the truest sense, this species is included here by reason of its dwarf habit. It is usually 1 foot high, the stems surmounted by two or three bright yellow blossoms. This species is better suited for the woodland or grassy spots, where it may be naturalised. It is sometimes found in Wales, though always in dry pastures, and occurs frequently in the mountain pastures of Southern Europe.

*R. MILLEFOLIATUS*.—A distinct and pretty kind with blossoms of a clear yellow. It is about 1 foot high, with erect, hairy, almost leafless stems and solitary blossoms. In some respects it is not unlike *R. chærophyllus*, though quite distinct in its roots and other essential details. This is not a true alpine, but is placed in this group by reason of its stature. The treatment recommended for such as *R. amplexicaulis* will in all probability make it even more vigorous than here given. If planted in the rock garden, the soil should be deep and fairly good.

*R. MONTANUS*.—This is easily grown in sandy loam and in spots somewhat shaded and cool. It is about 6 inches high, with bright yellow blossoms, each three-quarters of an inch across. The solitary blossoms are produced on somewhat downy stems, but near the ground this pubescent character is wanting. This species may be freely increased by division.

*R. PARNASSIIFOLIUS*.—The specific name of this kind alone shows features quite distinct that will prevent its being confounded with any other. The thick, entire, rather heart-shaped leaves are very distinct. The plant inhabits high elevations in the Alps and Pyrenees, and is usually found in granitic or calcareous soils in the fissures of rocks contiguous to perpetual snow. The flowers are snow-white and about the size of those of *R. amplexicaulis*, and produced several on a stem 6 inches high. This species may be successfully grown in quite moist loamy soil in much the same way as recommended for *R. anemonoides*.

*R. PYRENEUS*.—Another equally distinct kind growing about 1 foot high. *R. plantagineus*, from the Piedmontese Alps, and *R. bujaleurifolius*, usually found in moist valleys at a much lower

level, are varieties of this species. All have white flowers that appear in May and continue to July.

*R. PEDATUS*.—A yellow-flowered species nearly a foot high and rather abundantly distributed in parts of Hungary, Tartary, and about the river Volga, in Siberia. The leaves are smooth, the radical ones stalked, flower-stem erect, with from three to five flowers.

*R. RUTEFOLIUS*.—Another species from the higher Alps with unmistakable foliage characteristics. In common with other species from these high elevations, this one is only 4 inches or 6 inches high. In the plants I have seen the blossoms are white, but I notice they are described as yellow in the "Dictionary of Gardening." In "Alpine Flowers" they are also described as pretty white flowers with orange centres, which quite agrees with the plants I have grown from time to time.

*R. SCUTATUS*.—A distinct species, with large yellow flowers and very smooth kidney-shaped, crenate leaves. It is a native of the mountain woods of Hungary, and grows, when established, nearly a foot high. This latter is perhaps rare and only obtained by the best culture.

*R. SEGUERI*.—This distinct species grows about 6 inches high, having three-parted leaves and is more nearly allied to glacialis and alpestris, though very distinct from either. The flower-stem is erect and the flowers usually solitary. The blossoms are pure white, with distinctly rounded petals.

*R. THORA*.—A yellow-flowered species, closely related to *R. scutatus*, but differing in its always long-stalked and very smooth radical leaves. Both kinds require plenty of root-room to allow of full development, and with deep and good soil give little trouble once well planted. The more vigorous character of this kind renders a deep soil rather more needful.

The above selection will be found to contain most of those worthy of cultivation, while such as *cortusifolius*, *isopyrioides*, *bilobus*, *Trausfelleri* and *uniflorus* are others worthy of note in this extensive genus. Many of these dwarf alpine kinds are very pretty when grown in pans of rich soil by those who do not possess a rock garden, and in this way a large number of the choicest gems may be fully enjoyed. Thus grown, too, the protection of a cold house or frame at flowering time may be given, and in those gardens where many of the best kinds already exist seedlings should be raised. Some readers of *THE GARDEN*, too, may have opportunities of receiving collected plants or seeds from friends abroad, in which case seeds may be sown at once in fine sandy loam, and just covered with the same, placing a sheet of glass over all. Collected plants are often a source of much trouble and loss, and after many attempts—varying considerably in degree so far as success is concerned—I know of no better method than that of planting the roots in cocoanut fibre instead of soil. Give one good watering and place in a sheltered place in the open. Once the new roots push forth, there is some hope of success, and the plants are quite safe in this material till the following spring. Shallow pans or boxes are the best for this purpose, and not only for these, but for a large number of choice alpinists that suffer considerably in transit.

#### BORDER SPECIES OR VARIETIES.

*RANUNCULUS ACONITIFOLIUS*.—While I have placed this plant among the border sorts, it may be well to state that it is equally at home in quite wet or boggy spots, and in such yields a great mass of its dainty white flowers. The plant is well known, and grows quite 2 feet high when given moisture. A better known form is the double white kind called the Fair Maids of France (*R. aconitifolius* fl. pl.). Though not in any way difficult to grow, it certainly prefers, like the type, a quite moist position, or, failing this, good and deep soil.

**R. ACRIIS FL.-FL.** (Bachelor's Buttons).—This, though pleasing in colour and free flowering, does not possess the charming grace of the last-named.

**R. MONSPELIENSIS.**—Though a fairly good and distinct border kind, this is not common. A native of the Mediterranean region, it is apt to start into early growth, only to be cut down by spring frosts when these are severe, for which reason a northern or western position may retard its growth. It bears yellow blossoms on erect stems nearly 2 feet high in April and May.

**R. SPECIOSUS.**—This is a first-class border perennial of dwarf habit, and by no means so common as its merits justify. Individually, the blossoms are nearly the size of those of the Marsh Marigold. The plant delights in a deep and moist as well as rich soil, and gives freely of its handsome double flowers. Little more than 1 foot high and of tufted or semi-procumbent habit, the plant is well suited for grouping in or near the front of the border, or the drier margins of the bog garden, or even the lake.

#### MOISTURE-LOVING KINDS.

Though by no means a numerous class, these strictly moisture-loving kinds are not only a very beautiful class, but are also decidedly ornamental when given suitable positions.

**RANUNCULUS AQUATILIS** is abundant in many parts of Britain, particularly in ponds or wet and marshy ground. The plant flowers for many weeks in profusion, and, growing and spreading rapidly, should be kept within desired limits.

**R. LINGUA** is likewise a British kind, and, while not so abundant as the last, is much more valuable. Indeed, it is not too much to say it is among the handsomest of waterside plants. In water a foot deep or less it revels. Attaining 2 feet or sometimes nearly 3 feet high, it is easy to understand what may be accomplished with such a plant yielding so great a profusion of golden blossoms, each about 2 inches across. Many buds also appear in company with the erect golden cups, so that a brave show results when a group of several feet across exists. It may be readily obtained and increased, and once planted gives little trouble after.

**R. LYALLI** (Rockwood Lily) is one of the noblest of this race. Happily, too, in several districts the plants have survived the winter unharmed, a circumstance in some degree due to the quality as well as the temperature of the water in which it is grown. The large waxy-white blossoms, each often 4 inches across, and the cluster of yellow stamens render it a most conspicuous object. The handsome broad and leathery foliage, too, is produced on stout petioles, the branching stems reaching sometimes 3 feet or 4 feet high. It requires more care than the usual run of water-loving species, as so far success is not always ensured even when seeds are forthcoming. No plant is worth greater care, however, to make it a success.

#### FLORISTS' VARIETIES.

**RANUNCULUS ASIATICUS** has given rise to the various sections of garden Ranunculi, so much esteemed by the old florists. It is only in the more favoured parts of these islands that the roots or claws, as they are termed, can with safety be left in the soil all the year round. Where the soil is well drained, light and warm, this may be done; in all others it is necessary to lift them each year in the month of July and give a thorough drying before planting again in October or November. In heavy soils it may be best to defer planting till February or even March, the ground having been roughly prepared during the previous autumn. A perfectly drained as well as light soil is important, the same being deeply worked and well enriched with manure. On soils that are very hot and sandy, cow manure six months old will be best, by reason of its cool, moisture-holding propensity. The addition of soot and lime in winter and a dressing of bone-meal broadcast in the drills at planting will be of great value.

Where grown in quantity, shallows drills will be found the best, pressing the claws into position, making the soil above fairly firm. The French kinds are the strongest growers and very free-flowering. The Persian kinds are somewhat dwarfer and with smaller flowers, though containing many fine varieties, while the Turban forms include some of the most highly coloured of this race. The position best suited to these is a somewhat shady and sheltered one. The whole of this tribe possesses the additional advantage of being remarkably cheap, so that a large number may be planted at small cost. E. J.

## THE WEEK'S WORK.

### HARDY FRUIT GARDEN.

**ROOT-PRUNING.**—This operation is best undertaken at the same season as that of root-lifting, and the earlier it is performed within reason the better, as the wounds on the roots then heal over before winter sets in. Root-pruning is, however, a drastic remedy, and should be resorted to only in extreme cases and where the more rational method of root-lifting is found to be impracticable. Generally speaking, root-pruning would become unnecessary if gross-habited trees were to receive the needful check at the roots to induce fruitfulness while in a young state. The neglect of this, coupled with the annual close pruning practised in gardens, tends to keep such trees unfruitful, and the only way out of the difficulty in the end is to root-prune them. The operation of root-pruning differs from root-lifting, inasmuch as when opening out the trench all the larger roots found are severed, but although this is so, I always advise that roots from the size of a lead pencil downwards should be saved and laid out again when refilling the trench. The trench itself should be taken out 2 feet in width, and the distance from the tree will vary according to its size and age; but, as a rule, 6 feet is quite near enough, and in some cases it may be necessary to go quite 9 feet away from the stem. The trench should also be taken out deep enough to find all the roots, and the larger of these should be severed, and the smaller roots, as indicated above, saved and fastened back with pegs out of the way until the excavating is completed. All the mutilated portions of the roots should then be trimmed with a sharp knife, after which the trench can be filled in again. In some cases a little fresh soil may with advantage be placed about the more fibrous of the roots as the filling-in proceeds, as these are the kind of roots the trees should be encouraged to make and multiply. Root-pruning is best spread over two or three seasons, doing one side of the tree now and the other in two years' time, otherwise the trees would receive too great a check, if it did not cause actual death. Wall trees may be operated on in the same manner, and in their case a modicum of fresh soil should always be placed in the trench near the top when filling in again to encourage the roots to feed upwards.

**ASSISTING OLD TREES.**—It often happens that old and favourite trees get into a weak, debilitated state and cease to bear either altogether or only very inferior fruit. When such is the case and it is desirable to keep such trees, they may often, with a little care and attention, be brought back to a healthy condition if some new compost is placed about the roots. The surface soil should therefore be removed until plenty of roots is found, and then replace it with a compost of loam, burnt soil, wood-ashes, with a fair proportion of thoroughly rotted farmyard manure added, or plenty of bone-meal may be used instead. This compost should be trodden firmly and evenly over the roots, mulching afterwards with litter. If the soil about the roots is found to be dry, give a good soaking of water before applying the compost. The new soil will stimulate and incite the roots to renewed action, and growth, though weak the first year, will be stronger the

next, and by the third season a wonderful improvement will be perceptible, with the ultimate result that the trees will eventually become re-established in health. The same method may be pursued with regard to orchard trees, and grass orchards the turf on the surface may be chopped up and utilised for mixing with the top soil, as the surface can soon be made green again by raking it down and sowing some grass seed thereon. Old, but valuable trees can also be kept in good health for many years simply by repeated applications of liquid manure, which should be poured on the surface under each tree and as far as their branches spread. This is best applied during the autumn and winter months as liquid can be the better spared then, while also prevents waste taking place, as is generally the case when cesspools and pits get filled during the autumn and winter months.

**PLANTING.**—Where a reserve stock of Gooseberries, Currants, and Raspberries is grown at home and it has become necessary to make new plantations of either or all of them, the work may be undertaken at once, as both bushes and stock may be moved and transplanted without the slightest fear as to the result if carried out with all due despatch. It may be necessary in some localities to water the soil home about the roots before finally filling in the holes when planting, but after the rainfall of the latter part of August this will be the exception rather than the rule. Do not omit placing a little good compost of some description about the roots of the bushes if the staple is poor, if only gaps are being made in existing plantations. When forming new plantations plenty of manure should be trench in when preparing the site, and too much emphasis cannot be laid on this point when preparing a plot for Raspberries, as not only are they good feeders, but they generally occupy the same site for a good many years, hence the necessity of paying extra attention to this matter. The ground for these should be bastard-trench worked in old rubbish-heap material in the bottom spit if sufficient manure cannot be spared for both layers of soil, breaking up the hard bottom and leaving it there. Home-grown Apples, Pears, Plums, Peaches, Nectarines and Apricots may also be lifted and transplanted during the month, provided they are kept out of the ground as short a time as possible. All of these should be well watered home when the holes have been partly filled in with soil. Leave them an hour or two to drain before finishing off, and then mulch the surface with litter, as this will both conserve warmth and keep out cold and frost. Walls should be tacked or tied back to the walls rather loosely, and both these and other transplant trees should be syringed once a day. On very bright days a mat hung on the walls, or suspended on two stakes in front of trees out in the open, will prevent the foliage flagging to a great extent. When the trees have to be purchased, planting will of course be out of the question for some time to come, but holes and compost for placing about the roots can both be dug and prepared. When convenient to do so, a visit should also be paid a nursery where the growing of fruit trees is made a speciality, and then the purchaser can select the trees on the spot.

**DISTANCES FOR PLANTING.**—For the information of intending amateur planters the few following rules with regard to distances at which to plant the various kinds of fruit trees may be useful. Bush Apples, Pears, Plums, and Morello Cherries may be planted 6 feet apart and 3 feet from the edge of the walk. The first three mentioned may require to be lifted the second year after planting, but after this if due regard be paid to close pinching, this and the fact of their bearing fruit will keep them within bounds. This advice is given under the assumption that space is restricted, and that there is a desire to plant as many trees as can conveniently be accommodated. Where more space can be allowed, the trees may stand 8 feet apart, and this distance will also suit bushes of sweet and Kentish Cherries. If pyramid trees of the above-mentioned fruits are wished for, the

low a distance of from 8 feet to 10 feet between them, varying the same according to the height they are to be allowed to attain. Peaches, Nectarines, Apricots, Plums, and Morello Cherries are walls should be planted from 14 feet to 16 feet apart, and on high walls a standard trained tree could also be planted midway between each two of the latter to furnish the upper portions. Pears, Plums, and Cherries as cordons may stand from 18 inches to 2 feet apart: fan-trained Pears on the Quince 12 feet apart, on the Pear stock 18 feet, allowing 2 feet more for diagonal trained trees. Sweet Cherries as fan-trained trees may stand 14 feet apart, but allow 4 feet more for diagonals. Spaliers for the sides of walks may be planted from 15 feet to 20 feet apart, and low cordons for the same position 6 feet if single trained, if double with two stems 12 feet apart. Upright cordoned Plums or Pears may be planted between every two trees of either Peaches, Nectarines, Apricots, Plums, Cherries or Pears, to remain as a manucy. Bush Apples should be on the paradise stock and Pears on the Quince, as far as practicable for small gardens on account of their occupying less room. Gooseberries and Currants may be planted 4 feet apart and 6 feet between the rows.

A. W.

### KITCHEN GARDEN.

**MUSHROOMS.**—It is found in many gardens that these can be more freely produced and of better quality during the summer and autumn months on outside beds than from the Mushroom house proper. Under the most skilful treatment the beds will not always do well, the house being often ill-adapted for producing them at the season named. A dry atmosphere, together with too high a temperature, is more often the cause of failure than the spawn or the way in which the fermenting material has been prepared and the beds made up. Where any difficulty was found last winter in maintaining a continuous supply, it could be well to study what disadvantages the grower laboured under with a view to rectify such matters before the winter beds are made up. It is a common occurrence to find that the Mushroom house is in close proximity to that in which the boilers are fixed, and, further, that several of the hot-water mains are brought through this under the pathway and merely covered with flagstones. The heat arising from this would be greatly in excess of what is required for the well-being of the crop, while it is almost impossible to maintain any humidity in the atmosphere; and, further, if evaporating pans are used to supply steam, the steam condenses, causing the "buttons" to damp off before they attain a serviceable size. The evil of this kind is best overcome by placing 6 inches of gravel over the pathway, which will not only prevent the heat rising, but will assist to conserve moisture in the house. Failing suitable gravel, fine ashes or even ordinary soil could be used, covering this with a plank to walk upon. The end wall abutting on the boiler house should also be treated in a way to prevent heat passing through. The best plan would be to build up the boiler wall  $4\frac{1}{2}$  inches thick, but several inches on the permanent one. A pipe should be carried through the highest point in the roof immediately over the hollow space to allow the heat to pass off. Treated in this way a house which has previously proved unsuited for Mushroom culture may be found all that could be desired. I have seen many houses in which, though Mushrooms have been produced plentifully up to a certain age, they damp off wholesale before they become ready for use. This shows that there is not sufficient ventilation, and it is not a good sign to see the wall running with moisture when the door is opened in the morning. A few holes, if only an inch in diameter, made at the top of the door would allow much of the steam to pass off without creating a cold current of air, while, should it be deemed necessary, further means should be afforded for ventilation from the roof, always placing perforated zinc over the apertures. Such details as these if carried out may save much disappointment.

**PREPARING THE MATERIAL.**—It is always better to have several cartloads of suitable droppings in hand at one time than to try and prepare them in dribbles, though this has often to be done during wet weather. By having a good body of manure it is more easily brought into a suitable condition both as regards heat and moisture for forming the beds. Where a shed is not available to prepare a large quantity the manure should be carted to a sheltered position, such as against a wall, where it can be turned over as required and protected with shutters or thatched hurdles during rain. I strongly recommend mixing a good portion of leaves with the manure, as this not only increases the bulk, but the heat produced is less violent and more lasting, while by the addition of say one cartload of rich fine loam to six of manure the beds can be made much firmer and it encourages the spawn to spread, the Mushrooms being more fleshy and of better flavour than those produced in manure alone.

**WINTER TOMATOES.**—The warm weather of late, with an absence of frost at night, has proved favourable for plants under glass, as, being able to admit plenty of air, the growth made has been sturdy, while flowers have been produced freely and a good set of fruit obtained. Under these favourable conditions the plants, too, have kept free of disease. It is surprising what a small quantity of soil is required to establish really strong plants, so long as they receive careful attention in the way of watering. The most of our winter fruiterers are in 9-inch pots. The plants are about a yard high, with eight to ten trusses of fruit set on each, and yet the pots are barely half filled with soil. Had they received more root-run, no doubt the plants would have been much taller, but I doubt if they would have set a corresponding amount of fruit. Top-dressing will now have to be resorted to, as the strain of fruiting will prevent undue foliage being made. Not more than an inch of material will be afforded at one dressing, and this will be made quite firm to further induce the formation of short-jointed growth. The compost will consist of fresh turfy loam, to which will be added a sprinkling of bone-meal. I prefer the latter in the meal state, as it is more quickly assimilated by the roots than when used in a coarser condition. The plants should have plenty of room and be arranged near the roof, so that they will receive all the light possible when the short days come. It is best to devote a house to these plants, so that they can receive suitable treatment. Where other plants of a tender nature are grown with them, the treatment afforded seldom suits both, and more than probably the humid atmosphere maintained for the latter will soon weaken the constitution of the Tomatoes and disease will quickly appear. Even when wet or frosty weather overtakes us, a certain amount of ventilation will be necessary, together with a gentle warmth in the pipes to prevent a sluggish atmosphere in the house, and as a further means of warding off fungoid disease the pipes should be frequently painted over with sulphur mixed to the consistency of paint with the aid of milk. Strong doses of manure should be withheld, as the plants if grown in good loam will swell the fruit off quite large enough for winter supplies. Soot water is beneficial to the plants, but during sunless weather it is apt to give the fruit a bitter taste. If the plants are well cared for, they should continue to produce flower-trusses most of the winter, and though, of course, they will not be numerous, they will provide some late dishes towards spring before the summer-fruiterers turn in. It will be necessary, however, to assist the fruit to set by going over the bloom with a soft brush or rabbit's tail, at the same time exposing the flowers by removing or tying back the foliage immediately over them.

**SUCCESSION PLANTS.**—As it is always desirable to turn out winter-fruiterers the following spring directly they cease to yield, a good batch of strong plants should be ready to succeed them. These are best obtained by sowing in the autumn,

and if not already done a pinch of seed should be put in at once. As a rule, the seed germinates very freely. A great mistake is made in sowing too thickly, causing the seedlings to become drawn before they are barely ready for pricking off into pans or boxes. This should be particularly guarded against at the present sowing, or the plants may remain in a weak state all the winter. Keep them near the glass, and better allow two dozen plants plenty of room than endeavour to raise a larger quantity in a crowded state.

**OUTDOOR TOMATOES.**—It is seldom these do well after October comes in, as the cold nights and heavy dews cause the fruit to crack when the sun reaches them the following day. Where the plants are growing against a fence or wall and are still laden with fruit approaching maturity, a few odd lights placed over them will assist their ripening, or the fruit may be cut and placed in a warm, dry position.

RICHARD PARKER.

### NOTES FROM GUNTON.

ANY gardener happening to be in Norfolk would find Gunton well worth a visit just now. The hot, dry summer has of course left its mark, but the crops generally, both of fruit and vegetables, are looking well. In common with most gardens, Apples are the scarcest crop that has been known for many years, but Pears are plentiful and promise to swell to a good size. Almost every gardener has heard of the Gunton Pears, and while such second-rate flavoured sorts as Marie Louise d'Uccle, Beurré Clairgean, and Beurré Diel are found room for, the smaller sized, first-rate quality varieties receive every attention. Marie Louise, Thompson's, and Glou Moreceau all do well at Gunton, and the new President Barabe is bearing a heavy crop of medium-sized, russet-looking fruit. This Pear is sure to make a mark, as few late varieties possess such excellent flavour. Mr. Allan is working it on to old trees of inferior varieties. His enthusiasm in Strawberry culture is as great as ever, his latest achievement in the way of new varieties being Lady Sulfield, of which "D. T. F." recently wrote in terms of high praise. Latest of All is thought well of by Mr. Allan, but Monarch he regards as a coarse, rather washy variety. Gunton has long been noted for its good Grapes, and the crops this year are no exception to the rule. Muscat Hamburg has large bunches without a single shanked berry, and the Duke of Buccleuch worked on Alnwick Seedling has given such satisfaction, that Mr. Allan is extending it yearly, intending to fill the whole house with it. The bunches are of good size and the berries beautifully clear, with an entire absence of the spot which so often mars this otherwise fine white Grape. One thing that particularly struck me in these vineries was the fine lot of Lady Downe's on Vines trained up the back walls. The finest lot was in the Muscat house, the temperature of which Mr. Allan considers it requires. Not a damaged berry was to be seen, which can seldom be said when the Vines are trained in the ordinary way beneath the roof glass. In the early Peach house is a magnificent tree of Dymond, which is in great favour at Gunton, as it possesses every good qualification, the fruit, which sets very freely, being extra large, beautifully coloured, and most deliciously flavoured. In the same house is a fine young tree of Early Rivers Nectarine. Mr. Allan is delighted with this variety, as in his opinion it supersedes all others of the early section. I was much interested in a new Tomato growing in several houses side by side with Frogmore Prolific and Flam Green. The two latter were much affected by disease, while the new variety, named Powley's Up to Date, and raised by a market gardener near Norwich, is quite free from it. The fruit is of medium size, very symmetrical, and is produced in great numbers. It will no doubt make a fine market variety. Amongst the numerous sorts of Figs grown under glass, that deliciously flavoured, deep coloured fleshed variety Bourjassote Gris is re-

presented by a fine healthy bush now loaded with fruit. This Fig is not so well known as it should be. As seen at Gunton the tree is a strong, short-jointed grower, and where variety is wished for in early forced Figs, it should be associated with Brown Turkey and St. John's, as it does capitally in pots. As a rule, late Peas are in strong force at Gunton, an autumn supply being important. This year, however, mildew is very troublesome amongst late rows, Autoerat withstanding it better than any other variety. This is accounted for by its exceptionally robust growth, which stands it in good stead in times of drought. A good dry weather vegetable proving itself very useful just now is the New Zealand Spinach. If kept well picked down it continues to yield large quantities of its fine succulent leaves over a very long period without running to seed. Amongst Beet, Veitch's Selected Red finds most favour, being just the Beet for a gentleman's table. The roots under ordinary cultivation are of medium size, the colour a delicate red, with an entire absence of woolly rings so prominent in many of the much advertised varieties, while the flavour is excellent. The Chrysanthemums grown for large blooms are looking well this season, the wood being stout without grossness and apparently well ripened. The Belladonna Lily does wonderfully well at Gunton, growing in a narrow border of loamy compost close to the wall of a plant stove, the hot-water pipes running along close inside the wall. In a length of 9 feet of border I counted thirty-eight fine flower-stems, each bearing several extra large flowers. Evidently it requires a well-drained, warm root-run similar to the one described, as for years it failed at Gunton in an ordinary sunny border.

J. C.

## TREES AND SHRUBS.

### OLD HAWTHORN AT ST. COLUMBA'S COLLEGE.

A SHORT distance from Dublin, on the slopes of Kilmashogue Mountain, lies St. Columba's College, an ideal spot for a boy's school, and commanding superb views over Dublin Bay. In the grounds are many fine old trees, especially Beeches and Hollies; of the latter, many were evidently growing there long before the hand of man had touched the place. Amongst other ancient denizens is the Hawthorn shown in the annexed illustration, which in May last, when the photograph was taken, was a charming sight with its gnarled trunk and mass of snow-white blossoms. The Hawthorn—we do not call it "May" in Ireland—flourishes in abundance about Dublin, and many fine old specimens are to be seen in the Phoenix Park and elsewhere.

GREENWOOD PIM.

**Clerodendron foetidum.**—This *Clerodendron* is, from a flowering point of view, widely removed from the Japanese *C. triehotomum*, for the blossoms of this last are white, and protrude from large red calyces after the manner of the indoor kinds, while they are disposed in an open panicle. Those of *C. foetidum*, on the other hand, are packed closely together in a terminal head after the manner of an *Ixora*, but the blossoms are much more crowded. *C. foetidum*—of which I have lately seen some good examples—is one of Fortune's introductions from Northern China. In the milder districts of the country it is quite hardy, but elsewhere a certain amount of pro-

tection is necessary during severe winters. Unlike the commonly cultivated members of the genus, the stems of this species are only of annual duration, but of a stout, sturdy nature, and will reach a height of 4 feet to 5 feet. The large heart-shaped leaves are decidedly ornamental, while the flowers are of a bright rosy red tint, and deeper coloured in the bud state than they are after expansion. When the conditions are favourable to its well-doing this *Clerodendron* will quickly spread underground. It is also known by the specific name of *Bungei*, that of *foetidum* being derived from the fact that it gives off a very unpleasant smell if bruised in any way. At the close of a hot summer it, as a rule, flowers with greater freedom than at any other period. The Japanese *C. triehotomum* is also now in full flower, and is decidedly ornamental and quite distinct from anything else in flower, or in fact from any other hardy shrub, irrespective of the flowering season. This is a free-growing species, quite hardy, and can be readily increased

Abbotsbury, Dorsetshire, and remarks upon the amount of iron in the soil. Yet of the many *Hydrangeas* grown there, only, I think, in two cases have the plants blue flowers. These blue-flowered plants are growing in the shade, but blooms from cuttings from them have reverted to the pink shade. This fact would seem to point to shade being the prime factor in producing the blue colour, but I know of many cases where plants growing in shade bear pink or flesh-coloured flowers, and the brightest blue *Hydrangea* bloom that I ever saw were borne by plants growing in the full sun on the edge of a cliff overlooking Start Bay, where there was no particle of shade. Many of these blossoms were of almost a Forge-me-not blue. S. W. F.

### HARDY HEATHS.

I WAS pleased to see the note in *THE GARDEN* on page 191 respecting the *Erica vulgaris* HAR



An old Hawthorn at St. Columba's College, Dublin. From a photograph by Mr. Greenwood Pim.

to almost any extent from cuttings of the roots.—T.

**Colour in *Hydrangea hortensis*.**—The blue shade so often seen on the massive flower-heads that cover the great *Hydrangea* bushes in the south-west is, when it is clear in tone, very beautiful. On many plants the blossoms are of one uniform light blue tint, on others a portion may be blue and the remainder pink, while some blossoms exhibit a not very pleasing shade, in which both colours are mingled. At present the reason of this blue colouring seems but indefinitely understood. By some it is attributed to the presence of iron in the soil, by others to the plants being grown in the shade. It is true that many plants growing in soil heavily impregnated with iron bear blue flowers, but, on the other hand, many plants in the same soil have pink blossoms. In Canon Ellacombe's paper on "The Great Drought of 1896," a reprint of which appeared on page 204, he makes mention of the gardens at

mondi. It is one of the best white Heaths, and to see it at its best it should be planted in masses. One reason why we do not see more of these beautiful hardy plants is due to the treatment they receive at the hands of the planter. Another reason is that the best are often overlooked or left out through not knowing what to plant for effect. Where the *Rhododendron* and *Azalea* grow well there need be no difficulty in growing varieties of the hardy Heath. I would advise all who are so situated and real lovers of hardy flowers to add these to their list, for there is nothing more effective and beautiful than a bed of Heaths in bloom. I am well acquainted with them, and send you a list of eighteen of the best for massing and making a good show. There should be no less than fifty or more plants of each sort. The varieties of *E. cinerea* should be put 9 inches from plant to plant, and the *vulgaris* sort

inches apart. I also add time of blooming.

<i>Erica carnea</i> , red	March and April
" <i>alba</i>	" "
" <i>cinerea alba</i>	Aug. and Sept.
" <i>minor</i>	July and Aug.
" <i>rosea</i>	" "
" <i>purpurea</i>	" "
" <i>vagans alba</i>	Aug. to Oct.
" <i>grandiflora</i>	" "
" <i>rubra</i>	" "
" <i>vulgaris alba minor</i>	Aug. and Sept.
" " <i>pilosa</i>	" "
" " <i>rigida</i>	" "
" " <i>Serlei</i>	Sept. and Oct.
" " <i>Hammondi</i>	Aug. and Sept.
" <i>tenuis</i> (scarlet)	" "
" <i>Alporti</i> (crimson)	" "
" <i>aurea</i> , golden foliage, for winter and summer effect.	" "
" <i>cuprea</i> , similar to <i>aurea</i> , but more upright and quite distinct.	" "

*E. Alporti* and *E. Hammondi* would look well together, their growth being equal, also time of blooming. *E. rigida* and *tenuis* would also look well mixed, their growth and time of blooming being the same. By making a careful selection it is possible to have *Ericas* in bloom for quite six months. To show the reasons for the best advantage I select a gentle slope. There is no need to be particular as to the aspect so long as it is fully exposed to the sun. What hardy Heaths require is a suitable soil for the roots and free from shade. If the soil is likely to become too dry, a mulch of spent Hops or rotten manure would help them, and the ground should be trenched 12 inches deep, some leaf-mould or rotten manure being worked into it, and all made firm before planting. When once they are established they will last for years. If they become too large or straggling, cut them off close to the ground at the latter end of May or beginning of June. Give them a mulch of rotten manure, and they will soon grow and become vigorous again. *E. cinerea* requires to be divided every three or four years, as the plants become straggling. Add to the soil some leaf-mould or rotten manure, also mulch them with the same after planting. The best time to move Heaths is in September or the first week in October.

Two Dales, Matlock. C. REEVES.

STOVE AND GREENHOUSE.

ANTHURIUMS.

These bright and effective plants are deservedly popular, both the fine-foliaged species as *A. crystallinum*, and those with showy spathes as *Andreamm* finding plenty of admirers. The many hybrid forms, too, raised from the latter and other species are a good deal grown, but it must be admitted that there are many of these that are sent out with fancy names that are not worth the trouble of growing. Dull, slaty-looking purples and washed-out tints of pink and rose are certainly not an improvement on the old form, but the highly-tinted large spathed hybrids should be grown by all who have room for them. It is a fact worth noting in connection with these, that they will, if planted out or well watered so that the roots have a fair run, do very well with a good deal less heat than when grown in pots. Their additional strength has apparently the effect of making them more hardy, and only a few weeks since I saw in a very moderately heated conservatory a large number of healthy specimens growing on the walls. The leaves were broad, of that deep shining green that betokens robust health, and the spathes were very

large. Wherever a place suitable for these plants exists they should be planted. On rockwork it is very important that water easily drain away from the base of the plants, for though they all like a liberal supply of moisture, it is detrimental when lying stagnant about the roots. They should be planted in rough peat, broken up into lumps as large as a hen's egg, half the quantity of Sphagnum Moss and plenty of rough pottery ballast, charcoal or similar material. Their position in the house has a good deal to do with their successful treatment. In shady corners they are not satisfactory, nor will they stand the full glare of the sun; but if, by the interposition of climbers on the roof or the leaves of large plants a nice broken light is produced, they will be well suited in this respect. In such structures there is usually a nice genial temperature kept up, and the slight rise and fall in summer and winter are easily arranged. Anyone planting them and giving a little care is sure to be successful with them, and they make a welcome change from the ubiquitous *Begonias*, *Tradescantias* and others.

To grow *Anthuriums* in pots is not difficult, provided a warm temperature is maintained all the year round, and plenty of atmospheric moisture. Cleanliness is an important point, both the pots and compost needing careful attention in this respect. Young plants are usually more satisfactory than large old specimens, the latter, owing to the almost climbing habit of some of the species often getting leggy and bare of foliage below. Some of the kinds may be cut back with safety, but it is not always an improvement, as the side breaks form smaller leaves and spathes than the leading growths. Some of the varieties of *A. Scherzerianum* are neat, compact growers, and these make fine well-balanced specimens that for many months in the year are indeed bright and effective. A compost similar to that mentioned above suits pot plants, but the material will not of course be used in quite so rough a condition. When well rooted they may with advantage be allowed occasional waterings with well diluted guano or soot water, either of these helping the foliage considerably. In potting, keep the compost a little higher in the centre of the pot, this helping to throw the moisture away from the stem. No old sour peat should be allowed to remain about the roots, but otherwise disturb them as little as possible when renewing the compost. In a suitable atmosphere, and with clean plants for a start, insects are not usually very troublesome, but a small brown scale sometimes affects them. This should be at once removed when seen and kept in check by frequent sponging.

R.

**Leaky conservatory.**—I have charge of a small conservatory facing south and overhung with trees on the north, which leaks all over, carrying with it on to the roof more or less of the green matter which falls from the trees as well as possibly some portion of the white lead used in the paint. Can plants under such circumstances be kept in health?—CONSERVATORY.

\*.\* Drip, whether owing to defective glazing or the fact that the roof is too flat for the moisture that collects on the underside of the glass to pass away into the gutters, is most injurious to plants of all kinds. The heavy shade and drip from overhanging trees would be particularly detrimental to flowering plants and not to the liking of Palms, Ferns, and other plants grown for the beauty of their foliage. Conservatories are too often designed by architects who study only external appearances, and gardeners take charge of them only to find that they are so many "slaughter-houses." It is bad when the roofs are high enough for tall Palms to luxuriate under, but if added to these drawbacks a leaky

roof has to be contended with, nothing short of a range of plant-houses and plenty of labour can keep them properly "fed." Drip, with its accompaniments, a damp house and a moisture-laden atmosphere, is the very reverse of what we expect to find in a conservatory and where possible ought always to be remedied.—Ed.

TROPEOLUM TRICOLOR.

SEPTEMBER is a good time to pot up bulbs of this elegant and useful greenhouse *Tropeolum*. I have grown it trained both on rustic pieces of Larch and wire balloon and oval trellises painted green, and it is very effective in both ways. Old gardeners used to turn the bulbs out of the soil after the growth had matured in spring, and store them in a cool, dry place in silver sand, examining them occasionally towards autumn, so that potting could be performed immediately new growth commenced. A 6-inch pot suits them well, although I have known, say, three bulbs placed in an 8-inch or 9-inch pot for growing on into large specimens. A light loamy compost and plenty of leaf-mould and silver sand are the best rooting medium, and little water must be given till a foot or so of new growth is made. A soddened soil rots the base of the bulb before it has a chance to emit new rootlets. Some little trouble is needed to secure an evenly furnished trellis, as if the twining growths are left to themselves they soon get entangled, and no amount of patience will separate them. The best way is to insert one, two, or three small Hazel sticks, according to the number of growths that are emitted from the parent bulb, taking the leading points of these to the base of the sticks and letting them twine round these until the top is reached, when they may be gently unwound, tied to the trellis, and the points again taken to the sticks. *T. tricolor* and *T. Jarratti* used to be considered distinct, but are now catalogued, and rightly, so I think, as one and the same. The flowers, scarlet-yellow and black in colour, are produced in great abundance, and last a long time in perfection. When the bulbs are kept in the pots until repotted in autumn, they should be stowed away in a perfectly cool position, otherwise they are liable to shrivel and soften. The new growths must be watched, for slugs and small snails are very partial to them.

J. CRAWFORD.

**Lilium Krætzleri in pots.**—Reference was recently made to the value of this chaste Lily for open air. I can also speak in its favour as a grand pot Lily. Few, in fact, do better in pots than this variety, the plants when grown in, say, 10-inch or 12-inch pots coming in most useful at the end of August, and, if brought on behind a north wall in September, for standing in front halls, corridors, and conservatories. The flowers also, if cut with long stems, which the growth more than that of any other sort allows, look chaste and beautiful arranged in tall glasses in the drawing-room. Used sparingly with delicate Fern fronds or flimsy-coloured foliage, they are very welcome on the dinner-table, their fragrance, too, being of moderate strength only, giving no offence, as is the case with some Lilies when confined in living-rooms. One great secret in pot culture is repotting the bulbs directly the foliage dies down in autumn instead of waiting till spring, as formerly.—J. CRAWFORD.

**Myrosma canæfolia.**—Would some of your correspondents kindly inform me the treatment of the above plant? I have three plants in a conservatory which have made strong growth, but have never flowered.—W. J. R.

\*.\* This, like many other Gingerworts, is not very free-flowering, unless it is treated in a particularly liberal manner, such as planted out in a good open compost in a warm structure. If in pots the compost should consist of good turfy loam, leaf-mould, peat and sand, plenty of water being given during the growing season. Then, on the approach of autumn, the water supply

should be lessened, and throughout the winter the soil must be kept moderately dry so as to give it a period of rest. With the return of spring more water should be given and the plant then encouraged to grow away freely. It is essentially a stove plant, though it may be wintered in an intermediate temperature. Being grown altogether in a conservatory may have something to do with the non-flowering of the plant in question, and I should advise that after a winter's rest it be grown in a structure kept at a higher temperature than a conservatory. It is now generally known as *Phrynium Myrosma*.—H. P.

#### WINTER-BLOOMING CARNATIONS AFTER FLOWERING.

THE following treatment I find successful. As soon as the plants have done blooming, say in February or later, the old stems should be cut back to a healthy shoot as near the base as possible. Shake off carefully about half of the old soil and repot into a larger pot, using good sound loam with a portion of sand, well-rotted manure, and leaf-mould. Stake out and give the plants an occasional syringing. With many of the newer varieties a good crop of blooms will follow in June, especially if the plants are kept in a slightly heated house. The plants after blooming may have the shoots shortened, giving the plants a little fresh soil and standing the plants in the open. These will give another crop during November and onwards.

If no summer blooms are required the plants should be kept well topped to the end of June and the shoots tied out. After the second year Carnation plants are, generally speaking, not worth house room.—W. J. GODFREY, *Ermouth*.

— At page 218 "R. D." complains that so very little information has been forthcoming as to the best treatment of winter-blooming Carnations after flowering, and thinks that a few remarks occasionally on the subject would be of much service to amateurs, who frequently keep their plants for two or more years. Probably why so little has been written on the treatment of old plants is because so few gardeners care to keep them, preferring to propagate a fresh batch annually, and certainly, so far as my experience goes, this is, except in the case of a few sorts, the most satisfactory plan. I have, however, grown Miss Joliffe the second year into large bushes, which have borne plenty of blooms, and I have thought the colour of the flowers, as a rule, brighter than in those from yearling plants. My treatment is as follows: As soon as blooming is over, or, say in March, the plants are placed in a small house and fumigated once or twice to rid them of any greenfly that may be lurking about the tips of the shoots. The growths are then carefully thinned out, those on thick bushy plants reduced to one half—this is important—as if left unthinned they get crowded before the end of the next summer, and spoil one another. One-year-old plants, generally being in 6-inch pots, are then potted into others one or two sizes larger, according to their individual vigour, and placed in a perfectly cool, light house, which is freely aired by day and night. A pit is a very good place for them, as then they can be placed

close to the glass. A light fibrous loam containing abundance of natural grit with a sixth part leaf-mould grows them well. All manures are best excluded from the soil. In May, if the weather has become settled, the plants should be stood out of doors in a sheltered spot, on a bed of rough coal ashes—fine ashes are an evil, as the pots in course of time sink into them, and a water-logged condition is likely to ensue. Careful watering, eradicating by means of tobacco powder any greenfly which may appear, and laying the pots on their sides for a time, if heavy rains prevail, comprise the chief summer treatment. I never give manure water. About the first week in October remove the plants to a light, airy house, elevating them near to the roof glass, fumigate lightly occasionally, and water carefully, keeping a uniform night temperature of 45° in mild weather and 3° lower when the pipes have to be

#### THE SPOTTED GLOXINIAS.

SINCE this form of the *Gloxinia* was first introduced, now several years ago, there has been a decided improvement in form, in habit, and colour. In form the flowers have advanced breadth of petal, and also in the more expanded tube; in habit the advance is quite marked the more compact growth and in the great freedom of flowering, for which the best strains of the spotted form are now most remarkable. The leaf growth, too, has shown a distinct advance, being more vigorous, with the foliage not so pointed as formerly. In colour the improvement has been chiefly in the brighter and more varied spotting, and in the clear margin lines of pure white now so apparent in the best kinds or strains. The spotted *Gloxinias* a



*A seedling Gloxinia with spotted flowers.*

warmed to exclude frost. More heat than this weakens growth, encourages aphid, and is a sure forerunner of poor cuttings in spring.—J. CRAWFORD, *Coddington Hall*.

**Fuchsia Ballet Girl.**—This is one of the finest of the double varieties with white corolla. The flowers are large and full and the plant of good habit. It is becoming a great favourite with market growers, as it makes a capital plant in a 5-inch pot and blooms freely. Messrs. Veitch and Sons obtained an award of merit for the above in July, 1894.—A. H.

specially adapted for small pot culture. It is quite needless to exceed in size of pots those 6 inches in diameter, while plants fit almost for any purpose may be grown in one size less. They may also be flowered in still smaller pots. The substance of this form was at first quite flimsy, but it is all that one could wish. Altogether the *Gloxinias* are most beautiful subjects for the stove.—H.

— The majority of these will now have finished flowering, and gradual drying off of the bulbs must take place. Withholding water at once, as is sometimes done, will cause

orms to partly shrivel, a weak growth next year being the result. When the foliage turns yellow just enough water should be given to keep the soil from becoming dust-dry. In November the pots are best stood in a dry place at a temperature of about 50°, care being taken to keep them away from hot-water pipes. I saw a great lot of bulbs last spring which had been much injured by being stood on a shelf immediately over a hot-water pipe. Gloxinias are often lost in winter by being placed in too cold a house close to the glass, and, on the other hand, the bulbs are often excited to growth and their vitality greatly weakened through too much heat and moisture during the wintering season.—C. C. H.

—By many it is considered absolutely necessary for Gloxinias to be grown in heat, that is to say, treated generally as intermediate house plants, and while it must be done in order to flower them early, yet for late blooming very different treatment will yield highly satisfactory results. From the end of May onwards they may be grown without any heat whatever, and under such treatment will not begin to flower till the early part of August or thereabouts, when for six weeks or so they will yield a fine display in the greenhouse, and that, too, at a time when many of the summer-blooming plants are on the wane, when the fresh, brightly-coloured flowers of the Gloxinia are all the more valuable. In raising Gloxinias from seeds it is necessary to sow them in heat early in the year; hence for this cool treatment one-year-old tubers are required. I flower a considerable number in this way and find them particularly valuable for maintaining a display at the end of the summer. In the autumn the tubers are laid in boxes of sand and wintered at a temperature of 45° to 50°. During that period an occasional sprinkle is given to prevent the soil becoming too dry, and under such conditions the young shoots will commence to push up about the end of March. This year, owing to stress of work, our plants were not potted till a month later than that, and were then kept in the greenhouse till nearly the end of May, after which they were removed to an ordinary garden frame without any heat whatever. There they made slow, but sturdy progress, with a perfect immunity from insect pests, and by the latter part of June were ready for a shift from 2½-inch into 5-inch and 6-inch pots. The plants were shaded during bright sunshine, and the frame shut rather early in order to husband the fire-heat, while as the pot became filled with roots, occasional doses of liquid manure were given. Grown in this way the foliage is healthy and well coloured, thus seeming to show off the bright-tinted blossoms to the best advantage. A mixture of loam and leaf-mould, with a dash of rough sand, will just suit the Gloxinia, as it needs a good porous compost. If the flowers are cut when just expanding they remain fresh and bright for some days.—H. P.

**Aschynanthuses.**—The different species of Aschynanthus are all very beautiful when in flower, and in the case of most of them their usual season of blooming is during the autumn months. *A. speciosus* is one of the showiest members of the genus, the curved scarlet flowers marked with brown at the mouth being borne in large terminal clusters. One of the commonest, *A. Lobbianus*, is a general particular widely removed from the preceding, but in its way it is, I think, equally beautiful. In this the stems are slender and purple in colour, while the ovate leaves are small and more than an inch long, and of a deep, bright green, while the thimble-shaped calyx, which is quite 1 inch in length, is hairy and of a deep purple tint. Protruding therefrom we have the right scarlet corolla, curved as in the others, and about a couple of inches long. As the calyx is developed some little time before the corolla, the plant then presents the appearance of being studded with dull-coloured thimble-shaped blossoms, but as the corollas develop they impart an additional feature to the specimen. There are several other species, but the above

may be taken as a good representative couple, while a third species is well worth a place in any garden where facilities exist for its culture. This is *A. Hildebrandii*, a native of the Shan States. This was introduced to Kew in 1894, and up to the present I have not seen it anywhere else, though it is a charming little kind and quite the pigmy of the genus, for it only reaches a height of about 4 inches. The comparatively large scarlet flowers are borne in terminal clusters as in the others. This will succeed in a greenhouse temperature, but needs a fairly moist atmosphere such as a cool Orchid house. The other members of the genus are essentially stove plants. They are all more or less epiphytes, and do well treated as basket plants, particularly the slender yet free growing *A. Lobbianus*. A mixture of peat, Sphagnum, charcoal, and leaf-mould will suit them well, as they require a porous compost such as this. They need a liberal amount of water, of course more during the growing season than in the winter, but at no time should they be allowed to become dry. Throughout the summer frequent syringing is also very beneficial. Propagating is effected by means of cuttings which should be put into a light peaty compost with plenty of sand, and in a close propagating case will soon root.—H. P.

#### GARDENIAS.

I SHALL be much obliged if you will let me know in your columns what compost suits Gardenias best, also a little information upon their treatment. I shall also be pleased if you could tell me the best manner to pack the cut flowers to undergo a journey from twenty-four to thirty hours, and the composition used by florists to steep the flowers in when cut to ensure their lasting.—G. G.

\*\* The compost suitable for Gardenias will of course, to a certain extent, depend on the size of the plants, as when potting into large pots it must be much rougher than for small ones. In growing Gardenias many cultivators prefer to propagate their own plants, and this is generally done by cuttings of the half-ripened shoots put singly into small well-drained pots of sandy soil and kept in a close propagating case till rooted, which will be in about three weeks or so. When rooted they must be hardened off, by being inured to the air of an ordinary stove, when they can soon be shifted into larger pots. The points of the shoots must be pinched out from time to time in order to ensure a bushy habit of growth, and the structure in which the plants are kept should during the summer have a night temperature of 70° with a corresponding rise during the day. The plants should be so situated as to get as much light as possible, but at the same time they must be shaded from bright sunshine. By the end of June the plants will if they have done well be ready for their final shift, which may be into pots 6 inches or 7 inches in diameter. After this, if they are kept well syringed and the structure in which they are growing is shut up early in the afternoon in order to husband the sun-heat, they will make rapid progress. By the end of August they must have more air in order to harden them off, and very little, if any, shading will then be needed. During the winter a minimum night temperature of 55° with a rise of 10° or so during the day is very suitable for them. As the spring advances the flowers will quickly open in the higher temperature. Throughout all stages of growth, except during the winter, Gardenias are greatly benefited by a liberal syringing, as it tends to keep the foliage green and healthy, added to which the plants are often attacked by insect pests, and a liberal use of the syringe will help to keep them under. If bug or scale effect a lodgment on the plants, they must be laid on their sides and syringed with one of the many insecticides which are effectual in destroying these pests. After flowering any straggling shoots may be shortened, and the plants shifted on into pots about 3 inches

larger than the others. They must again be encouraged to grow freely during the summer, and be hardened off towards autumn. The flowering season in the spring may be regulated by the temperature maintained at that time, and it is generally the custom to bring them on in batches in order to ensure a succession of bloom.

The flowers should be packed in shallow boxes, as they travel much better in this way than when in layers. To send by rail several of these shallow boxes may be put into a deeper one for convenience. If a little fresh Moss nearly dry or the finest wood wool is put over the bottom of the box in a thin layer and covered with tissue paper, which must also extend around the sides, the flowers must be arranged thereon as closely as possible, and the box finished off with a few layers of tissue paper on the top. In packing flowers many make the mistake of being too cautious, that is to say, they put them too loosely together, the consequence being that they move about and become bruised beyond recognition. A firm hand is necessary in packing flowers, and practice is most essential. Flowers that are intended for travelling should be cut a few hours before they are packed and placed in jars of water, and they will then be well charged with moisture and better able to bear the journey than if cut and packed at once. I know of no composition to steep the flowers in in order to ensure their lasting.—H. P.

#### Variegated Pelargonium Mrs. Parker.

This Pelargonium is on page 198 referred to by "R. D.," who states that he is not sure if it is in commerce. It has been grown for years, and by some is much appreciated, not only as a pot plant, but also for the flower garden. It is a sport from a one time popular variety, Leamington Lassie, which is of especial interest to the readers of THE GARDEN, as it is the only semi-double zonal Pelargonium of which a coloured plate has been issued, and that was as long ago as April 23, 1877. The flowers of Leamington Lassie are a kind of lilac-pink, and the variety Mrs. Parker does not differ therefrom in any respect, except that the leaves are deeply margined with white. There is a second variety of this section, that is with variegated leaves and double or semi-double blossoms, which is often confounded with the variety in question. This is Chelsea Gem, whose leaves are not so flat as those of the other, and though the variegation is of a purer white it is not so broad. The colour of the flowers, too, is different, that of Chelsea Gem being a clear deep pink. Both are free-branching, low-growing kinds, the variety Chelsea Gem being the more vigorous of the two.—H. P.

**Boronia serrulata.**—The recent note regarding this beautiful New Holland plant reminds one how difficult it has been to obtain it for some time, till a few years ago it was taken in hand by Messrs. Balchin, of Hassocks, who may be said to have rescued from oblivion the charming blue-flowered *Boronia serrulata*. They have been equally successful in the culture of the *Boronia*, and as recently as the last Temple show numerous flowering examples were exhibited by them. The colour both of the *Boronia* and the *Leschenaultia* is decidedly richer on the plants grown at Hassocks than it is in most places. This is presumably owing to proximity to the sea, combined with the clear, pure air of the Southdowns, for this feature is by no means confined to the two plants in question. Crotons, Dracenas, Acalyphas, and various indoor plants grown for the beauty of the foliage are all unusually bright throughout the district in question, while out of doors the variegated forms of *Euonymus*, *Hollies*, and *Privet*, as well as the tricolor and bronze-leaved Pelargoniums all attract particular attention from the richness of their colouring. The flowers, too, of the different zonal Pelargoniums are from the same circumstance very noticeable.—H. C.

**Richardia albo-maculata.**—This cannot for one moment be compared with the large showy species of *Richardia* such as *R. aethiopica*, *R.*

Elliottiana, and R. Pentlandi, yet for all this it is very pretty and particularly free flowering. It is a small growing plant, as if kept out of doors it is little more than a foot high, but under glass it of course grows somewhat taller. The leaves are narrower in proportion to their length than those of the common Calla, while they are blotched with white on a green ground. The flowers are creamy white, with a reddish blotch at the base of the interior. This species often produces a double spathe, while occasionally the inflorescence is particularly curious, consisting as it does of a half spathe, half leaf. This *Richardia* grows with great freedom, and towards the end of the summer a plentiful crop of blossoms is pushed up. It differs from the common Lily of the Nile in being totally deciduous during the winter; indeed, it forms a solid tuber which needs to be kept almost dry throughout that season. This latter remark will apply to all the *Richardias* except the universally grown Lily of the Nile, *R. aethiopica*.—H. P.

#### FUCHSIAS WITH WHITE COROLLAS.

In the early sixties the varieties of Fuchsia with white corollas were but few, and very few of that limited number are now in cultivation. Still, a couple of them may be occasionally met with, viz., Madame Cornelissen, which is still a very desirable form for flowering out of doors during the summer, the growth being compact and sturdy and the plant free flowering. The second, Princess of Prussia, is somewhat in the same way, for in both of them the corolla is single. The variety Princess of Prussia occurs in a catalogue of Messrs. Rollisson for the spring of 1858, when it was described as a novelty, having received a first class certificate at Regent's Park during the preceding summer. Of varieties with double white corollas, Avalanche held its own for a very long time, and it is still grown to a certain extent. There was a second variety of the same name the flowers of which were dark, and both being popular at the same period often led to a good deal of confusion. At the present time quite a long list of varieties, both single and double, is to be met with; indeed, they are so numerous that it is difficult to make a selection therefrom. One of the very best is Ballet Girl, which was given an award of merit by the Royal Horticultural Society in the summer of 1894. This variety is of good free growth, very free-flowering, with a large double white corolla veined with red at the base. The bright coral-red sepals are longer than in several others and reflex gracefully, a feature which is frequently wanting in many of the newer large-flowered varieties. Besides this a couple of new varieties from M. Lemoine, of Nancy, have pleased me very much, and they are certainly worth a place among the most select of this section. The varieties in question are Due d'Annale, with a large globular-shaped white corolla, marked with red on the lower part of the petals. The sepals are short and broad, the flowers reminding one to a considerable extent of those of the once universally grown Miss Lucy Finnis, which, however, is a weak grower, while in this newer kind the style of growth and habit altogether leaves nothing to be desired. The second to be mentioned is De Goncourt, in which the corolla is single and of an exceedingly pure white; the sepals, too, which reflex beautifully, are long and of a bright coral-red tint. The edges of the petals are somewhat wavy, hence the corolla is less formal in outline than in many of the others. The habit of the plant is good, and the flowers, which are supported by long stout stalks, display themselves to the very best advantage. Another of M. Lemoine's varieties, Madame Carnot, will commend itself to the lover of huge blooms, for, in addition to this, it is free-flowering. The leaves of this are rather small and roundish, and the habit of the plant more upright than in most of them, but the weight of the flowers causes the branches to partially droop, for the massive blooms are thickly clustered near the points. Other good

varieties are Molesworth, Flocon de Neige, Duchess of Edinburgh, Colonel Dominé, and Mrs. Hill. As an illustration of the prominent position that the Fuchsia occupied for a time may be mentioned the fact that out of the seventy varieties acknowledged by the Royal Horticultural Society from 1859 to the present time fifty of them obtained their awards between the years 1865 and 1875. GROWER.

#### LILY OF THE VALLEY.

REFERRING to the article on the Lily of the Valley (page 182), though it has not, as far as I am aware, ever received a first-class certificate, yet the particular variety, of which a coloured plate accompanied the article in question, was given an award of merit on March 25, 1890. Fontin's var. is undoubtedly a very superior form, the large open bells being characteristic of the German type, from which it has doubtless sprung. Of the immense numbers of the Lily of Valley which are sent to this country during the winter months, the greater portion of the single crowns or eyes is obtained from the Berlin district, while, on the other hand, most of the clumps come here from Holland. The flowers of these last are totally different from the German ones, being very much more contracted at the mouth; hence they appear a good deal smaller. For early forcing the Berlin crowns are preferred, as they respond to heat more readily than the others, but for the embellishment of the greenhouse as spring advances the Dutch clumps are by many regarded as superior, for, being taken up with the ball of earth adhering to them, their roots receive but little mutilation, and therefore when the bright spring weather sets in they do not flag so readily as the German crowns, whose roots are shaken entirely clear of soil before they are sent here, and the flower-stem is pushed up previous to the roots establishing themselves in the new soil. Despite the fact that we get nearly all our supplies of the Lily of the Valley from abroad, Mr. Jannoch has shown us that with care and attention its culture in this country can be made remunerative. Such being the case, the question is suggested whether a good deal of the money that we pay to the foreigner for *Spiraeas*, *Dielytras*, and different bulbs might not be kept in the country, for we have many wide districts well suited for their culture. The use of the refrigerator has given a great impetus to the culture of the Lily of the Valley, and beautiful flowers of it may now be seen in the florists' shops of London at all seasons of the year. About twenty-five years ago I was connected with a market nursery where the Lily of the Valley was made a special feature. In those days a few spikes of the very earliest blooms were ready for market by the first or second week in December, and it was considered particularly good culture to have an ample supply by Christmas, and those that were fortunate enough to obtain flowers by that time found the Lily of the Valley a very remunerative crop. In those days its culture was very limited compared with what it is at the present time. H. P.

**Richardia Pentlandi.**—Though the early part of the summer is the usual flowering season of this *Richardia*, yet several plants in full bloom have come under my notice of late, and at this time of the year the bright golden-coloured spathes are particularly welcome. The plants, which are thus blossoming out of their season, were imported from South Africa in a dormant state late last spring, and having been potted and placed under conditions favourable to growth, in due time some of them flowered. This and *R. Elliottiana* are certainly two beautiful golden-flowered *Richardias*. They are both a good deal in the same way, the principal points of difference being that the flowers of *R. Pentlandi* have a blotch of crimson at the bottom of the tube, and this is wanting in *R. Elliottiana*. Besides that the leaves of this latter are marked with irregular

translucent spots, while those of *R. Pentlandi* of a uniform deep green. The blade of the leaf, too, is rounder in *R. Elliottiana* than in the other and this character alone is sufficiently pronounced to distinguish between them. Among the late importations of these golden-flowered *Richardias* that now reach this country two forms are represented—firstly, *R. Pentlandi* itself, and secondly a variety of the same, in which the leaves are marked as in *R. Elliottiana*. It is, however, quite distinct therefrom, being, in fact, a counterpart of *Pentlandi* except that the leaves are spotted. I have met with it under the name *Richardia Pentlandi maculata*, which has the advantage of expressing its prominent characteristics.—H. P.

**Lilium Harrisii.**—When this was first sent to this country in quantity, about a dozen years ago, a good deal of interest was aroused as to what it was really a particularly early flowering form, or owed this feature only to the conditions under which the bulbs had been grown. This latter theory is now proved to be the correct one, for the open ground, at all events in the second season, it will flower at the same time as the rest of the longiflorum section; indeed, *L. Harrisii* from Bermuda cannot under such conditions be distinguished from *L. longiflorum* from Japan. Planted in the open ground it makes sturdy growth and flowers profusely, so that a mass of *Lilium* with its countless trumpets of dazzling whiteness forms a very attractive feature. I have with numerous examples of it this season in particularly good condition both by itself and associated with other subjects. A mass of this interspersed with the scarlet spikes of *Gladiolus brenchleyensis* was particularly showy when in its best. As *L. Harrisii* is often brought on considerable heat for early flowering, the idea that it is a tender Lily is very widespread, but such is not the case, as our average winters do not produce any effect upon it. It succeeds best in a good open loam, fairly sandy, and where the drainage is good, though not in a spot dried up during summer.—GROWER.

#### FRUIT AND VEGETABLE CROPS

##### NORTHERN.

**Lambton Castle, Durham.**—The Apple and Pear crop in our county, I am sorry to say very poor. During the time the trees were in bloom we had strong winds and frosts that seem to cut the blossoms all to pieces; consequently very few set their fruit except in sheltered places and on the walls, where a fair crop exists. Bush fruit is fairly good, although not a heavy crop. Gooseberries are clean and a good medium crop. Currants are a fair crop; Raspberries medium crop and clean.

Vegetables are good upon the whole. Green of all sorts are clean and healthy, and look finishing satisfactorily. Onions are small, owing to the want of rain during their growing season. Potatoes are good and free from disease, and the varieties have done well here. Peas and Beans are doing well and free from mildew. J. HUNTER.

**Castle Howard.**—Apples, on the whole, rather a thin crop. In situations well sheltered from north winds there is nothing to complain of and such varieties as Keswick Codlin, Cock, Lord Suffield, Domino, Lane's Prince Albert, and Duchess of Oldenburg are well loaded with fruit even in rather exposed positions. Provided rain comes soon, the yield will not be so bad as was anticipated a short time ago. Pears on walls a good average crop, so also are some varieties the open where well sheltered. Those exposed are almost a failure. Plums may be regarded as a total failure; even Victoria and Rivers' Early Prolific, varieties which are among our sure croppers, are barren. Apricots are also almost a failure, and the few fruits have suffered from drought, some falling, and the remainder being

all. Cherries, both sweet and Morello, are under the average and smaller than usual. Gooseberries and Black Currants have been about a crop, whilst Red Currants and Raspberries are an average crop. Outdoor Peaches and Nectarines may be regarded as a failure, and Strawberries have been both small and few in number. The poor crops of fruit in this neighbourhood are attributed to the late frosts and cold, cutting winds which prevailed in spring and early summer, and the long spell of drought and excessive heat from which we are now (August 7) suffering.—J. RIDDELL.

**Kirklevington Hall, Yarm.**—The fruit crops in this district are not heavy, but on the whole there is not much to complain of. The crops in spring were not so thickly covered with bloom as they were last year, and although we had no May frosts to destroy it, yet the cold, dry winds we had during May and June did great damage. Apples are a thin crop. Pears a fair average crop, especially on old trees. Plums are up to the average on old trees, but on standards a failure. Morello Cherries are a good crop, but rather small. Strawberries have also done well, but the fruit is small. Raspberries have been very scarce. Currants, Red and Black, and Gooseberries have been very plentiful and good. Potatoes are turning out well. Peas have been good; in fact, all vegetable crops are good where they have been watered and properly attended to.—ALEX. CUNNINGHAM.

**Widd Hall, Ripley.**—In this district Strawberries, Currants, and Gooseberries have been an average crop, but the fruit has been rather small. Raspberries, Pears, and Apples are below average, and Plums are a total failure. The varieties that bore the best crops are, Apples: Lee's Prince Albert, New Hawthornden, Cellini, Kewick Codlin, Lord Suffield, Potts' Seedling, Summer Pippin, Scarlet Nonpareil, Golden Nale, Ecklinville; of Pears, Louise Bonne of Jersey, Marie Louise, Durondeau, Doyenné d'Été, Berré Giffard, Bergamote d'Esperen, and Winter Pear. Apricots are a very scarce crop. Onions are small. The vegetables that have suffered most are the Brassicas and Peas and Beans. The principal cause is the cold winds that prevailed in the early part of this year and the absence of rain for so long a period.—W. DINES.

**Met Hall, Leeds.**—Owing to severe frost on the night of May 11, with cold winds and a drizzle the following day, fruit trees suffered severely, as the majority were in full bloom. Some large Horse Chestnuts breaking into growth were completely blackened and have not yet recovered. Then the gale on June 16 shattered nearly everything to atoms. Some Oak trees and a timber hedge adjoining the kitchen garden looked as if they had been scorched with fire. Fruit trees in some cases were stripped of their fruit and foliage, and vegetables, such as Peas, French Beans, Scarlet Runners, Potatoes, Lettuce, and Jerusalem Artichokes were torn to pieces. This year will long be remembered for the destruction wrought by wind at York gala. There is a complete wreck of tents and produce I never witnessed, and a worse season, I think, I have never experienced. Nearly everything here appeared about a fortnight later than usual. Apples, Pears, and Plums are below average; Cherries, Gooseberries, Currants, and Raspberries poor; Strawberries very good.

The kitchen garden here is very much exposed to the north-west and rests on a strong clay, so that most vegetables have wonderfully improved during the recent hot weather, and do not suffer from drought so much as in some gardens, although we had only 1.04 inches of rain during July in eight days, two of which measured 0.84 inch, so that the remainder was only like dew. Up to date of writing (August 12) we have registered 0.40 inch for the present month, with continuous hot weather. Peas are very good, especially Ne Plus Ultra. Early Potatoes are all, but late ones appear very promising.

Beet, Onions, Turnips, Carrots, and Lettuce have not been so good for years, but Cauliflowers are small. Brussels Sprouts and Savoys are looking very well, but Broccoli and autumn Cauliflowers are suffering from continued drought and water here is very scarce. I heard some farmers remark that they never saw Turnips in the fields looking better than at present.—THOS. BONSALE.

**Grimston Park, Tadcaster.**—Fruit crops generally are very light in this district, stone fruits particularly so. It is some years since I had such thin crops of Apricots and Plums as there are this year. On an Apricot wall nearly 100 yards in length in these gardens there is only one tree that has even a fairly good crop upon it. I have tried to account for this. Up to now I have come to no logical conclusion on the point. There are other trees of the same variety on the wall quite fruitless; it is Hemskirk. The tree has not been lifted in recent years, nor yet root-pruned, nor in any way treated differently from the rest. There has been no branch-dying on Apricots this summer, as is too often the case. To my mind the sunstroke theory of the cause of branch-dying breaks down completely now, as it is some years since our trees had so much hot sun shining upon them, as during the past two months. The trees generally are very healthy, foliage being good and free from insects. Even if we do get some sharp frosts at blooming time next year I venture to say, with the protection of a double herring net, there will be some Apricots. Peaches are very thin, but the trees in this case are healthy and fairly free from insects; Plums the same. Even that free fruiting variety Victoria is all but fruitless this year. Apples are partial. There is a nice crop on some kinds, but as a whole the crop is not more than a third of a good average one. Keswick Codlin, Lord Suffield, Improved Cockpit, Irish Peach, Warner's King, Yorkshire Greening and Rose Hill are the only kinds that have anything like a crop of fruit on them. In this case also the trees generally are healthy and fairly clean. Pears, too, are a thin crop; Doyenné d'Été, Citron des Carmes, Beurré d'Amanlis, Urbaniste and Jargonelle have good crops. The same remark applies to some old trees of that well-known excellent Pear Marie Louise. In this case they are planted on the north side of a wall. Some twenty-five years ago I trained branches over to the south side of the wall, which they now cover for some 6 feet of its upper surface. I generally get some good fruit from this portion of the trees; this year there is a very good crop. Cherries are a thin crop. For some cause not known to me I never get good crops of dessert Cherries here. I have tried fresh soil, &c., but have not yet succeeded as I could wish. Some two miles off as the crow flies there are some fine fruitful trees of Bigarreau. I do not even get the trees to grow well against walls. The soil is a stiff holding one, about 3 feet in depth, overlying magnesian limestone. Can anyone throw light on the subject? Morello Cherries grow and fruit very well. I have had good crops of bush fruits, though not quite so abundant as in some years. Gooseberries were fine in size and flavour, but owing to the very dry July soon past their best. Red and White Currants were a good crop, but not so large in berry as usual from the same cause. The same remarks apply to Black Currants. Raspberries were but a thin crop, except that very excellent variety Superlative, the best cropping variety I have, and the fruit of a good size. It has one drawback as to increasing the stock, viz., it throws suckers up very scantily. I hardly dare put into figures the amount of fruit an acre of land would produce if covered with this Raspberry in rows 4 feet apart, judging by what the one row 20 yards long gave me this year. There are good crops of Walnuts and Hazel Nuts hereabouts. I had excellent crops of Strawberries, but owing to the drought they were soon over.

Speaking generally, vegetable crops have been under the average hereabouts this season. Even the most self-satisfied and up-to-date cultivators are more or less under the influence of the weather

in this part of gardening. With the exception of 1879, this season has been the worst I have had to deal with in my twenty-five seasons here. We had a wet winter, a cold, ungenial spring; then in June came a spell of hot sunshine, which somewhat baked the surface of our stiff, cool soil. All through that month and also July we had continued drought with plenty of sunshine. The good effects of the latter were much counteracted by two or three sudden lowerings of the temperature with cutting winds of some duration. All newly-planted-out stuff, such as bedding plants, vegetables of kinds, &c., started very badly. Early Peas were good, but a week later than last year in coming in. I still grow a few rows on a south border of what our kitchen garden man calls bullet Peas, viz., such kinds as Ringleader, First and Best. They come into use sooner than Exonian and William I., which are two good early kinds both for cropping and table use. Gladiator grown on the same border succeeds the latter kinds well. I follow on with Advancer, Premier, and Dr. Maclean. It may here be mentioned that after growing the Maclean family of Peas for thirty years I have nothing but good to say of them. Veitch's Perfection is an old, well-proved friend for midseason use. Then comes one row each of Criterion, Champion of England, and Ne Plus Ultra, Ebor, a very excellent selection from Ne Plus Ultra, and last, but not least either in height or usefulness, the good old British Queen. It is only fair to add that only those who can command tall Pea sticks should grow the kinds named above. Hawfinches have troubled us a lot this year. It is surprising what harm a few of them can soon make in a row of Peas just coming into use. Nothing but shooting them early in the morning or late in the evening is effectual. Early Potatoes have been a good crop as to quantity, but owing to the drought much smaller than usual. I have seen no sign of disease in the garden as yet. Veitch's Ashleaf, Sandringham Kidney, and Racehorse are my standard kinds for early crops. I have grown the two latter kinds over twenty years in these gardens without changing the seed. A new kind of Potato named English Beauty promises well. I have tried another so-called new kind called Fore-runner, but think it is our old friend the Walnut Leaf under a new name. Anyhow I shall be pleased to have a stock of that good old kind once again under any name. For early forcing in pots some thirty years ago it was considered indispensable. I do not grow any late kinds in the garden. French Beans have been very good in crop, but short-lived, causing more occasional sowings than in more moist seasons. Osborn's Forcing, Ne Plus Ultra, Fulmer's Forcing, and Negro Longpod are the varieties I grow. Scarlet Runners are very late coming into use this year. Veitch's Mammoth Scarlet and Scarlet Champion serve me well for abundant long-continued crops. Onions are not so good as usual owing to the dry season; they are healthy, and bulbs are firm but small. I generally sow about 300 square yards of land with this useful crop. The treatment from first to last has been the same for over twenty-five years. In some seasons I have taken over 160 stones of Onions from the area named; this year there will not be more than a third of that quantity, if so many. Other tuberous and bulbous-rooted vegetables promise to be fairly good. Green vegetables, such as Cauliflowers, Cabbages, &c., are now growing away well after the grand rains we have had. They are more or less riddled by the larvae of the white butterfly, which were very numerous in July. Celery is now growing away very well. Whenever able I give a good watering of diluted house sewage to this. At present there is no sign of damage done by the Celery fly. Last year it injured the crop very much.—HENRY J. CLAYTON.

**Hurworth Grange, Darlington.**—Fruit trees generally were full of bloom, but owing to the cold east winds we had in spring the crops vary very much. Strawberries were a fair crop and of average size and quality, but soon over. Gooseberries, Black, White and Red Currants

are a good crop. Raspberries poor. Cherries dropped three parts of their fruit in stoning and are thin. Pears vary. Jargonelle, Beurré d'Ananlis, Clapp's Favourite, Bergamots, and one or two others have good crops; the rest are thin. Apples are thin generally, as also are Apricots. Peaches in case a good crop. Plums are the worst crop I have ever had.

Potatoes are a good crop, but a great many small ones. Peas, Beans, and Cauliflowers have taken a lot of water and go off very quickly. Carrots, Turnips, and Onions are small. Winter greens have required a lot of attention both in watering and filling up. Our land here is strong loam on strong clay, and cracks and bakes very much in dry weather.—JOS. SIMPSON.

**Wiggantheorpe, York.** This is one of the worst seasons I have had for this time both for fruit and most kinds of vegetables. There was every prospect of a good crop of Pears and Plums as far as the show of bloom was concerned. Apple trees were not so full of bloom. Plums are almost a failure, Victoria being the only kind carrying a crop. The better kinds on walls are a total failure. Though there was a good show of Pear blossom only a few kinds are a good crop on walls. Jargonelle, Marie Louise, Beurré Clairgeau, and Passe Colmar bearing best. Bush trees have hardly a fruit upon them. Apples are a light crop; only a few kinds are bearing fruit, these being Keswick Codlin, Cellini, Manks Codlin, Burr Knot, New Hawthornden, Stirling Castle, Lane's Prince Albert, and Cockpit, the last-named the only one carrying a heavy crop. With the exception of Royal Sovereign, Strawberries have done badly. Gooseberries and Currants have been plentiful, but the former did not ripen properly, which I attributed to the very dry season. Raspberries are very few and small; Morello Cherries an average crop. We had a very dry time as well as strong, cold winds when the trees were in bloom. Whether the failure of the fruit crops is due to this cause or to the wet autumn it is difficult to say.

The greatest sufferers, owing to the prolonged drought, amongst vegetables are Peas and Celery. Early Potatoes are good and quite free from disease; later sorts will be small. Owing doubtless to the cold spring, all crops came into use later than usual.—J. S. UPEX.

**Eden Hall, Langwathby.**—Apples in this part are a fair average crop, whilst Pears are heavy, most trees carrying fine crops. Cherries are an average crop, but Plums considerably under average. Apricots are very poor. Strawberries, Currants, Gooseberries, and Raspberries have all been very heavy crops.

Vegetables have done well, French and Runner Beans exceptionally good. Peas suffered considerably from the long spell of drought experienced here, so have not been of long duration. All winter crops look very promising after the rains we have had during the last fortnight.—ARTHUR SMITH.

**Seaham Hall Gardens, Seaham Harbour.**—Apples are under the average, although the sorts that flowered late are better crops. Such as Lord Sutfield on walls and in sheltered places that escaped the sea-fogs have a fair crop. Wellington and an old sort called Pine-apple have fair crops. Pears are under the average owing to the cold weather when in flower. Plums are a failure from the same cause. Cherries are under the average. Gooseberries and Currants have about a quarter of a crop, except on those trees that I do not prune. The close branches protect the blossom and fruit just after it has set. Raspberries have fair crops, but suffered from the dry weather.

Potatoes look well both in gardens and fields and there is no disease. Peas did wonderfully well, considering the dry weather.—R. DRAPER.

#### SCOTLAND.

**Dalkeith Palace.**—The fruit crops in this district vary considerably in different places. Where the garden or orchard is favourably situated and the fruit trees and bushes receive due

attention, the crops, as may be expected, compare to advantage with those grown under less favourable circumstances. On the whole, where the trees are well-sheltered and properly cultivated the crops are a fair average. Apples are a fair crop; Pears abundant; Plums irregular; Cherries light; Peaches and Nectarines on walls very good; Apricots light; Gooseberries fair; Currants good; Raspberries and Nuts very good; and Strawberries abundant, but late. All kinds of fruit are better in size and quality than usual, owing probably to the warm and genial weather experienced since the middle of June, and the absence of insect and fungoid pests in the early part of the season. Fruit trees have made a fine, free, and clean growth, and with good ripening weather in autumn they promise well for a good crop next season.—M. DUNN.

**Dunrobin Castle Gardens, Sutherland.**—Fruit crops here are decidedly under the average, with the exception perhaps of late Strawberries, which were a good crop and of good quality. Standard Apples inside the walls bear a very thin crop—many trees none at all. On a south wall facing the sea Keswick Codlins are a medium crop. Plums and Pears are scarcely half an average crop. Raspberries under average. Bush fruits are about half a crop; Gooseberries very thin—the poorest crop for many years.

Vegetables are good. Carrots and Onions have stood the drought well, and have not been so good for several years. French Beans were very backward for some time, but the warm weather of July has brought them round. Peas have been plentiful and good, but the drought of July has caused them to come in too much together. Potatoes were later than usual in getting to be of good quality. They are a good crop, and at the present date free from disease.—D. MELVILLE.

**Tynninghame Castle, East Lothian.**—Apricots are practically a failure. Plums and Pears, on the other hand, are so heavy as to require severe hand-thinning. Both are much later than usual, and the latter are not swelling to an average size. Apples are a fair crop with me, but in some gardens they have failed. The fruit of the Codlins is spotted, and late kinds much smaller than usual. Figs are a fair crop, but fruit small. Peaches none. Small fruits have been good, though Strawberries did not turn out so well as expected on light soils. On heavy land the crop was a good one, though of short duration. Brambles are an extraordinary crop, so also is the Japanese Wineberry, both small fruits that are valuable late in the season.

The most remarkable feature in the vegetable department has been the erratic behaviour of many of the kinds. This began with early winter and spring Broccoli, and ever since, perhaps largely owing to the lateness of the season, one has been unable to depend on crops turning regularly in. All crops, however, are very good, though Onions will not be so large as usual, and Celery is also backward. No doubt the last-named will make up. All winter crops are doing well. Potatoes have been very good and up to date no disease, but the humid weather we have experienced for some time has destroyed the foliage, and it will not be surprising if later sorts suffer from disease.—R. P. BROTHERSTON.

**Balcarres, Fife.**—The fruit crop suffered much from late frosts and cold east winds during the month of May. Apples are only a moderate crop. Pears very good where sheltered. Plums, Peaches, and Cherries much below the average. All small fruits are good, particularly Gooseberries. The early Strawberries were very light, but late varieties and Elton Pine very good, the best we have had for years.

Vegetables are three weeks later, but very good. Potatoes small and late and now attacked with disease.—EDWARD TATE.

**Blackadder, Edrom.**—The fruit crop in this district, although most promising in the early spring, proves now, taking it all over, to be rather below the average. Apples are very much under, owing chiefly to the great destruction

wrought on the buds by bullfinches in spring; the small percentage of buds remaining further reduced when in flower by a hard frost the first week of June. Pears, Plums, and Cherries are an average crop. Some varieties of the two former are considerably over, notably Jargonelle Pear and Victoria Plum. Buds of latter seem to be less palatable to birds than other sorts of Plums, as this was the only variety that escaped their ravages. Green Gages were completely stripped and only show a few fruit per tree. Had the repeated attempts to keep birds in spring been successful, I venture to say that the Plum crop here would have been an enormous one. Peaches and Nectarines are much under the average. Apricots slightly under, but of very good quality. Small fruits mostly average, Currants being rather under, but Raspberries greatly over, all of good quality. Strawberries promised well, but were, unfortunately, just in flower at the time of the frost already mentioned and were all blackened; small flowers which opened later gave a few small fruits of poor quality.

Vegetables made little progress in the early part of the season, but with cooler nights and plenty of moisture a rush has taken place, and to a great extent made up for the time lost earlier in the season. Peas at several places have been exceptionally good, and all other vegetables, to my knowledge, are a fair crop. Potatoes are now suffering badly from disease.—J. IRONSIDE.

**Brechin Castle, Forfar.**—The fruit crops in the gardens here I consider a fair average. In the case of Apples, the majority carry a fair quantity, which promises well, and, having got plenty of rain lately, should swell to a useful size. Stirling Castle, Ecklinville, Beauty of Moray, Lane's Prince Albert, Lord Grosvenor, King of Pippins, and Warner's King are among our best croppers this season. Pears seem more plentiful than last season, but not more than an average crop. Both Apples and Pears are good and healthy. Plums are under, while Cherries are a good average. Peaches I do not grow of doors. Small fruits have been plentiful. Strawberries, although late in ripening, were a good crop and of fine quality; late sorts ripen late. Everything is much later this season.

Vegetables, although very slow to start in the earlier part of the summer, are now doing well, but there was little genial weather before the month of July; indeed, on July 8 the thermometer was down to freezing point. Peas have done well with shorter straw than we generally have. French Beans are good. Early-planted Cauliflower made little progress or else butted soon after planting, but later batches are turning in splendidly. Potatoes are a fine crop of good size and quality, and there is no appearance of disease.—WILLIAM McDOWALL.

**Tulloch Castle, N.B.**—In regard to fruit I beg to state that small fruit is very plentiful; grand crop all over. Cherries and Plums are only exceptions. Apples are a fair crop and abundant.

Vegetables (all kinds) were never better. The weather this season suits our soil, consequently vegetables have done extra well.—DAVID HUNTER.

**Lennox Castle, Lennoxtown.**—In the neighbourhood Apples and Pears are good. Plums very fine. Cherries of all kinds very good. Bush fruits, such as Gooseberries, Currants, and Red, White and Black Currants quite up to the average. Strawberries in the early part of the season were very good, but suffered badly from the wet weather at the end of the season.

Vegetables are a good average crop.—J. TINSLEY.

**The Gardens, The Glen, N.B.**—Small fruit are an abundant crop, except Gooseberries, which are a light crop in most places owing to frost when they were in flower. Apples on walls are a good crop; bushes and standards are thin. Cherries and Plums are very light. Victoria Plum only is good. Raspberries have been good and the fine. Strawberries, although late, are a heavy

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## ORCHIDS.

### RHAMMATOPHYLLUM SPECIOSUM.

The flowering of this remarkable species in the collection of Sir T. Lawrence has been an event of considerable interest to Orchid growers in the country. A cut spike of this plant was exhibited at the Drill Hall meeting on August 24 on which occasion it was awarded a gold medal. It is truly a giant of its race. The plant has been grown for a number of years in the Burford collection, and has been a subject of special care to Mr. W. H. White, who has been rewarded for his pains in successfully rearing one of the rarest Orchids in cultivation. The growth of the plant varies from 7 feet to 10 feet long. There is no doubt that it is owing to its gigantic size this species does not get the attention it deserves. It is a native of the May Archipelago, and to illustrate its dimensions it is interesting to note particulars recorded by Mr. J. H. Veitch in "A Traveller's Notes" of a plant under Mr. Curtis's charge at P. Lang which was, with careful measurements, 12 feet in circumference, the stems from 6 feet to 7 feet long, the capsules with their stalks 7½ inches long, without them 5 inches, and 2 inches in diameter. One of the previous year's capsules, of which there were thirty, measured 7 feet long. The same writer also gives particulars of a still larger specimen in the Botanic Gardens, Java. This plant had forty-six capsules, some with twenty-four flowers open and many more buds to expand. The plant was 15 feet through, with stems 9 feet long. When it is considered that the individual flowers of Sir T. Lawrence's plant measured over 5 inches across, one cannot but agree with Mr. Veitch's remark that it must have been a splendid sight.

There are very few collections in this country that can afford accommodation for such plants. The plant in the Burford collection is accommodated at one end of a large span-roofed stove. There is also another large specimen in the

south-west corner of the Victoria tank at Kew, where it is thriving well, and should not be long, judging from its dimensions, before it flowers. This plant was imported by Messrs. F. Sander and Co., of St. Albans, in 1893, and was afterwards presented by them to the Royal Gardens. A particular characteristic of this species may be noted in the habit it has of producing numerous erect branching roots round the base. There was recently a smaller plant in Messrs. Charlesworth and Co.'s nurseries at Bradford which was developing the same characteristics. There does not appear to be any great difficulty in the cultivation of this species beyond the question of room. It requires hothouse treatment with a liberal supply of moisture during the growing season, with only sufficient shade to prevent the sun scorching it. It was introduced by Messrs. Loddiges, and flowered for the first time imperfectly in their Hackney nurseries in 1852. In 1859, in the collection of Mr. W. G. Farner, Ewell, Surrey, it flowered well. Later it bloomed with Mr. G. Staunton at Leigh Park and in the collection of the late Mr. J. Day. STELLIS.

**Cypripedium Lowi.**—This very distinct plant I noticed in flower this week, the bloom-spikes being over 2 feet in length, and bearing each four and five flowers. The dorsal sepal is yellowish lined below with purple, and has often a greenish area at the base, the light green petals being spotted with pale rosy-purple. It is a vigorous grower, liking a fairly large pot and plenty of heat and moisture.—R.

**Epidendrum vitellinum.**—This is now flowering in many collections, and is a useful Orchid for keeping up a display over a long season. It may be grown by anyone having a cool, moist house, and should be planted in pots, these being well drained, and a compost of good peat fibre and Sphagnum Moss used. Although possibly most of the plants now sold in this country are *E. v. majus*, there is no doubt that a much larger form than the majority of these exists. This should be looked out for among imported plants, for it is one of the very best red-flowering Orchids

in cultivation. It is a native of Mexico, and first flowered in England in 1839.

**Cattleya bicolor.**—Flowers of this *Cattleya* come from "S. M." for a name. It is an old species, not so showy as some, but very distinct. The growth is erect and the spikes contain a dozen or more flowers varying in size, the largest being about 4½ inches across. The sepals and petals are olive-brown, the lip crimson on the front and side lobes. It is a free-growing, easily-cultivated species requiring the usual *Cattleya* treatment, and flowers abundantly every season. The compost may consist of rough peat, Moss, and charcoal over good drainage, and medium-sized pots should be chosen. It is a native of Minas Geraes, in Brazil, whence it was introduced in 1838.

**Pleione lagenaria.**—This is one of the earliest of the genus to bloom, and one of the most useful. The flowers are each 3 inches across, the sepals and petals rosy lilac, the lip similar in ground colour, with many bright purple stripes, and a pretty wavy margin. It grows freely in an intermediate temperature, the young pseudo-bulbs being repotted early in spring in a compost consisting of fibrous loam, peat, and chopped Moss, the drainage coming in for especial attention. When the growth gets well away and the young roots are running freely in the new compost plenty of water is required at the roots, but during the early winter, after the leaves have fallen and the flowers are past, keep them quite dry. A light sunny house and a temperature that does not fall below 50° suit the plants well at this stage. *P. lagenaria* is one of the introductions of the late Mr. T. Lobl, who sent it to Messrs. Veitch in 1849.

**Trichosma suavis.**—A nice form of this pretty Orchid comes from a correspondent, the flowers having been apparently cut from a spike thrown well up, as they are not all crowded together in the way often seen. *T. suavis* is for this reason rather a disappointing Orchid, but when the growths are strong and healthy, and the compost well filled with roots, there is not much to complain of as a rule. It does well in a rough compost, with plenty of Sphagnum Moss and charcoal mixed with the best peat fibre. Owing to the fleshy nature of the roots, they cannot

thrive if the material is at all close. It is better not to let newly-imported plants flower during the first season or two, and until they have formed one set of growths, keep them in an intermediate house. After this they will thrive well in company with *Odontoglossums*. *T. suavis* is a native of the Khasia Hills, and was sent to Chatsworth in 1836.

**Cattleya Mendeli and C. Mossiae.**—I have plants of *Cattleya Mendeli* and *C. Mossiae* showing flower-sheaths at top of new bulb. Should they be kept dry now till spring, or will they be better kept growing longer? None of my Orchid books tell me what to do in this case. The plants seem quite strong and healthy.—A. R. W.

\* \* \* Keep the plants growing in the *Cattleya* house until the young pseudo-bulbs are quite made up, when a slight reduction in the water supply may be made. *C. Mendeli* should by now be finished, but *C. Mossiae*, flowering rather later, usually requires a little more time. They have both the same habit, viz., resting in sheath during the winter and making up the young growths after the flowers are past. In this way they differ from *C. labiata autumnalis* and *C. Gaskelliana*, which bloom on the current year's pseudo-bulbs. A good deal depends on how all these *Cattleyas* are watered during the winter. If well ripened by exposure to light during the autumn they will do with much less water than if green and succulent, but in no case must they be kept dry too long, this causing the bulbs to shrivel and the buds in consequence to start weakly in spring.—R.

#### CIRRHOPEALUMS.

This genus is rather a large one, but at least two-thirds of the species known to botanists are not in cultivation, or at all events are so little known, that few Orchid growers trouble about them. The structure of the blossoms is remarkable and beautiful, quite as much so as that of the nearly-related *Bulbophyllums*, and they are more useful than these from a garden point of view. They are all dwarf-growing plants, of a pseudo-bulbous habit, the bulbs springing from a scaly rhizome at various distances apart, and each bearing a single leaf. Anyone who has a house suiting *Dendrobies* well, should, with a little care, manage *Cirrhopetalums*. None of them like a great amount of compost, and I have seen excellent examples grown on blocks of Tree Fern stem suspended not far from the roof in a hot, moist house. The growths were large and healthy, and roots had been freely produced, almost entirely covering the blocks referred to. But this material is not always at hand, and fine plants may be grown in the small hanging pans so often recommended for dwarf Orchids. These may be almost filled with clean crocks, and, a suitable size having been chosen, the plants firmly fixed in position by dibbling in peat and Moss with a few bits of charcoal. Keep the plant high in the centre and the leads as far from the edge of the pan as possible. Plenty of light and air, an atmosphere saturated with moisture and abundance of heat are necessary while growth is active, and the strong buoyant atmosphere, created by shutting the house early on bright days and allowing the sun to shine full on the plants, is also much to their taste. The blinds of course would not be taken up before every part of the house had been thoroughly damped, as this causes a film of moisture on the glass that prevents any possibility of the foliage being burned. This must be continued as long as growth lasts, but when the pseudo-bulbs are well filled out, increase the ventilation and lessen the moisture both in the atmosphere and at the roots. I have likened their treatment to that for *Dendrobiums*, but during the winter they will not stand so much drying at the root as the long-bulbed deciduous

section of that favourite genus. The treatment they like is more that given to *D. aggregatum* or *D. Jenkinsi*, viz., just water enough to keep the foliage fresh and the pseudo-bulbs from shrivelling. Then many *Dendrobies* stand a very low temperature, but it is not safe to keep *Cirrhopetalums* much below 55° at night even when quite at rest. The species mentioned below are the most generally known, but several recently introduced kinds are not included.

**C. CUMINGI** is a dwarf-growing plant. The flower-spikes are very thin and wiry, and each bears on the top a circular umbel of about a dozen flowers. These have the outer segments of a reddish-purple, the lip similar in colour, and so lightly hinged that the least movement in the air sets it in motion. It is a native of the Philippine Islands, and was sent by Cuming to Messrs. Loddiges about 1840.

**C. MEDUSE** is a native of Singapore. In habit it is not unlike the last named, but the blossoms are very singular, the sepals being much elongated, and, owing to the large number of flowers, the umbel appears like a head with long, dishevelled hair. The colour is creamy white, with pinkish spots upon the segments. This was also introduced by the Messrs. Loddiges about the same time as the last-named.

**C. ORNATISSIMUM**, although a small grower, is a bright and effective plant when in flower. The spikes are each about 6 inches high and the flowers are brownish yellow, spotted and striped with purple. The lower segments are long and tail-like, the upper ones shorter, with a fringe of hair-like processes on each. This species is a native of the Himalayas, and was introduced in 1879.

**C. PICTURATUM** is perhaps as popular as any in the genus and a distinct kind, bearing many-flowered umbels upon a tall wiry scape. These are each about 2 inches in diameter, varying in colour, but usually some tint of greenish yellow, spotted with bright red. It was introduced many years ago from Moumein, and again lately by collectors in Burma.

**C. THOUARSI** produces small, smooth pseudo-bulbs at some distance apart on the rhizome, and one-sided racemes of flowers of a tawny orange colour, spotted with bright red. It comes from various parts of the Philippine Islands, and also as far west as Madagascar. It is named after a French botanist, who discovered it about 1836. R.

**Epidendrum cuspidatum.**—A fine plant of this useful and pretty old species was recently in flower at Melford Hall. It is one of the oldest kinds in this extensive and variable genus, having, it is said, been introduced late in the last century from the West Indies. In habit it very closely resembles a *Cattleya* of one of the dwarf *labiata* kinds; in fact, it has often been imported with them. The spikes bear about half a dozen flowers, the sepals and petals of which are nankeen-yellow with a bronzy reverse, the lip usually pure white and deeply fringed. Its culture is not difficult, the plants requiring a medium sized pot with a nice open compost of good texture. The drainage must be well attended to, and the plants elevated only slightly above the rims. Place the plants in a light, almost unshaded, part of the *Cattleya* house where they can obtain abundance of fresh air. During the time growth is active, and until the flowers are past, keep the roots nicely moist, but as soon as possible afterwards reduce the water supply and place the plants in a cooler and very airy house, where they will be entirely at rest until the spring. So treated, it flowers annually and freely, but if allowed to grow during the winter months it is more shy.

**Odontoglossum tripudians.**—There are few more variable *Odontoglossums* than this, some of the best of them ranking almost as high as the better-known *O. triumphans* so far as beauty and usefulness go. In habit it resembles the *crispum* set, and the flowers are similarly produced, viz., on long arching scapes from the base of the

pseudo-bulbs. In colour the typical form has yellow segments, more or less blotched chestnut-brown, the lip being sometimes yellow (*xanthoglossum*) or white (*leucoglossum*), variably blotched with crimson or brown. It comes the centre of the *Odontoglossum* region in Grenada at a considerable elevation, and its treatment does not differ materially from that of *crispum* and *Pescatorei* forms with which associated in a wild state. Grow it as strong as possible in a cool, moist, and shady house until all these plants delight in. During winter must be kept as near the light as possible, never allowed to remain dry at the root for any length of time. The pots used should be large enough to show a narrow margin all round the plant, and an inch of compost is sufficient for medium-sized plants. It was discovered by late M. Warszewicz in 1849, and has since been imported by many of the principal growers in this country and on the Continent.

#### ONCIDIUM GARDNERI.

The flowers of this *Oncidium* are handsome, lasting, and I noted it this week thriving in a house with the coolest section of *Odontoglossums*. I have found it to succeed better with rather warmth, such as *O. Forbesi* and one or two of the *crispum* set like, but the instance above shows it is not a very fastidious species. In habit it is strong, the pseudo-bulbs, each 3 inches high, dark bronzy green, with fine dark green leaves, occurring at intervals on a creeping rhizome. The spikes are long and branching; the flowers, each about 2 inches across, have chestnut-brown sepals and petals margined with bright yellow. The lip is yellow, the brown spots being principally disposed around the margin. A mistake often made in its culture is growing it on a low stage away from the light, and in a deep, poorly-drained, pot and a thick compost. A much more satisfactory in shallow baskets filled with drainage or on teak rafts, either which should be suspended as close as possible to the roof-glass in a position where it can have ample light without being exactly exposed to the full glare of the sun. This, with the constant circulation of air that usually goes on in such a position, causes a hard, solid growth. In fixing the plants on the rafts thin strips of cork may be cut and laid across the rhizomes, a wire being passed over them and brought between the rods, where it can be fastened. If the plants are newly imported only partly established, no compost need be used for the first year, but a little *Sphagnum* must be worked in for established plants. The roots are strong and fairly large, and disclose medium, but if plenty of air reaches through the rods of the basket or raft they will be healthy and long-lived. For baskets about 4 inches of compost suffices, the remainder of the depth being filled with crocks. Even more is necessary here in fixing, for the roots can get a hold if the plant is so loosely fixed that the basket about when the basket is moved. A close observation of the roots is the best guide as to the quantity of water needed, these being frequently very active while the spikes are forming. Syringing overhead is not desirable as a rule, most likely time for it to do good being at the time of the hot, dry days in summer. Plants that are growing freely must be watered daily, but when at rest keep the roots well on the side, only watering sufficiently to keep them in good order. *O. Gardneri* grows naturally at great elevations on the Organ Mountains, and was introduced in 1843.

**Cattleya Schofieldiana.**—In its best form this is one of the most striking of *Cattleyas*, the section to which it belongs, the yellow sepals, prettily spotted with crimson and purple, having a very fine effect when arranged with suitable greenery. Botanically it

most *C. granulosa*; indeed, some botanists treat it as a variety of this species, but it is far preferable to some of the older varieties of the kind. It is an erect-growing kind, each pseudobulb bearing a pair of dark green leaves, from between which spring the flower-spikes, the individual blooms being about 4 inches across. *C. Schfieldiana* may be grown in the usual Cattleya temperature, a light and airy position being best for it, where it is only shaded from the direct rays of the sun. During the early part of the season it should be liberally treated and grown as thickly as possible, and after the flowers are kept a little on the dry side to cause it to ripen. Very little trouble will be found in keeping its annual periods of growth and rest. It likes a rough open material and not too much potting, the young growths being kept as near the surface as possible. It first flowered in 1882 with Mr. W. L. Schofield, of Manchester.

NOTES OF THE WEEK.

*Fucus speciosus* is now very beautiful in the rock garden, where the dark-coloured blossoms are very striking, though appearing to greater advantage perhaps when mingling with the pure white form of the Meadow Saffron (*Colechicum autumnale album*).

*Primula Poissoni* is an interesting as well as a showy flowering species with blossoms of a lilac shade, and growing quite a foot high. Individually, however, the flowers are not large, and for this reason the plants should be set rather closely together and in groups of about a score.

*Phlox Cochineal*.—A very fine and showy variety of a crimson-scarlet hue, the blossoms being well lifted up and supported on stout footstalks. Another excellent kind, equally free and striking, is the General Gordon, of a most brilliant shade of vermillion-scarlet. Both are planted at Kew with a view to their effect on the grass.

*Hydrangea Novi-Belgii densus*.—Despite the fact that this is one of the most free-flowering, as well as among the finest of the blue kinds, it is, nevertheless, rather formal, the great mass of blossom appearing all on one level at about 3 feet high. A different aspect may be obtained by planting such on a somewhat rugged or uneven surface.

*Artemisia arborescens*.—Even with a wealth of blossom in the rock garden this is a showy plant by reason of its distinct appearance. At the present time, however, it is perhaps more conspicuous than it appeared a short time since. A catal bush some 2 feet or 3 feet high is very striking when the silvery hue of the leaves is at its best.

*Asperula sitchense*.—This tall and extremely elegant North American plant is now very fine in my garden. It is very striking at the back of a herbaceous border, its curious cream-white spikes of flowers being uncommonly numerous. The plant is of strong habit and a very hardy perennial.—E. E. ST. PAUL, *The Woods, Ripon*.

*Colechicum autumnale album plenum*—It is very curious to note how slowly some of the best plants appear to increase. The above is a case in point, a plant above the average in merit, and still, as it was thirty years ago, very scarce. A good clump of this on a grassy slope where the soil has been prepared for it is not easily to be often if once seen in good flower.

*Geranium aurantiacum*.—Though quite an early grown plant in almost any position, there is a rather early value in this species when planted on the sunny banks or similar places, especially where the plants get the early morning sun. In full sun the plant blooms profusely for a long season, and the colour also is distinct. The flowers quickly close when the warmth of the sun is at its best.

*Gegetes signata pumila*.—As an edging or carpet to taller things this is a very useful

plant, that flowers profusely for a long time. Shorn of its pretty blossoms, the plant has been largely used in carpet bedding in the past because of the neat and pleasing habit. There is a much wider field open for such useful things when allowed to grow and flower naturally, as they certainly should.

*Hibiscus moscheutos*.—A very distinct species from North America bearing this name is now flowering near the entrance to the Orchid house at Kew. The plant is quite erect and between 5 feet and 6 feet high, freely branched from the base, and producing its creamy-yellow blossoms profusely on the several branches. The blossoms are large and bell-shaped, and in this instance quite self-coloured, which is not usual.

*Anemone Whirlwind*.—The earliest flowers of this were not particularly good, but during the past three weeks the plant has been quite a feature in Messrs. Barr's Ditton Nurseries. Essentially an autumn flower, its blossoms are now very fine, rejoicing in the cooler nights and days and lasting a long time in capital condition. Quite near, a large group of the pink variety *A. j. elegans* is also charming, the blossoms very large and handsome.

*Linum narbonneuse*.—This is still laden with its lovely blue flowers, and though somewhat frail and delicate-looking when only a single plant is seen, it makes a most delightful object when freely grouped either in the border or the rock garden. In whatever position it is planted, the best results are secured when the plant is allowed to grow naturally. In this way half a dozen plants make a really charming and graceful group, and the bright sky-blue blossoms a fair picture.

*Hippeastrum aulicum*.—If lacking some of the fine form, massive appearance, and rich colour of the newer hybrids of this race, this species is at least striking and effective. More than this, it possesses an additional value by reason of its usually flowering in the autumn at a time when not many species are in bloom. The scape is fully 2 feet high and the finely coloured flowers somewhat numerous from large bulbs. Some plants of this Brazilian kind are now flowering at Kew.

*Gazania nivea latiflora*.—This is a very distinct and beautiful plant, still flowering profusely at Kew. The flowers are whitish in colour, perhaps more cream coloured even than this, while the florets are broad and imbricated. The plant is regarded as fairly hardy, and, judging by the many buds still appearing, would make a fine addition to autumn flowers for the warmer positions in the rock garden. A good sized patch of its handsome flowers would make a quite unique display at this season.

*Coreopsis grandiflora*.—Judging by the fine display of its blossoms, and also their size individually, as seen in Messrs. Barr's nursery recently, one would imagine that seedlings were flowering for the first time. But in place of this the plants have been blooming continuously for fully three months past and are still giving splendid blossoms. The thin wiry stems of this plant are of great service when the flowers are used for cutting, while in the border it is one of the most showy of plants still in bloom.

*Phlox amœna*.—Among the dwarf Phloxes, that is the true alpine forms and other allied kinds, this pretty species should always be freely grown if only for its value in spring and autumn. Naturally enough, the finest display is in spring, but where the plants are divided and replanted after this flowering it frequently happens that quite a rich display is secured in the early autumn. At the latter named date the rock garden is by no means gay, and this easily grown plant should in no wise be lost sight of. Its free growth and abundant flowering at all times render it a desirable species for the rock garden. In any position deep and fairly rich soil is always appreciated.

*Androsace lanuginosa*.—Both the type and the variety known as *oculata* still give many

heads of beautiful and pleasing blossoms. In the rock garden the plant is usually most happy, though in many gardens the inclination is to give far too little soil for the support of these dwarf alpine, and in this instance the plants never appear to break freely into growth. What may be accomplished with such lovely alpine as this may be gathered from an illustration in THE GARDEN at page 257. Rarely indeed does this species without pinching or pruning form so dense a covering of its soft silken leaves and numerous heads of blossom. Evidently soil and position have suited it, and I would like to know the exact position occupied by so fine a tuft.—E. J.

FLOWER GARDEN.

NARCISSUS CALATHINUS.

MUCH has been written about this pretty little plant, although great confusion prevails still on the subject, so much so, that, according to the "Index Kewensis," *Narcissus calathinus* does not exist at all, whilst there are several members of the genus bearing such a name. Even Linné (spec. plant, ed. 2, vol. i., p. 347) says *Narcissus calathinus* is found in Southern Europe and in Orient, but we know that at that time Linné was not very particular about the true habitat of the plants, and that in several instances he assigned them the locality of the correspondent who sent them to him. Delarbre in 1800 (*Flor. Auver.*, vol. ii., p. 591) writes: "*Narcissus calathinus* is the same as *N. heminalis* (Schult.), which is plentiful at Orcival, in the mountainous districts of Auvergne, and at the Mont d'Or." Loiseleur Delongchamps ("Recherches Botaniques sur les Narcisses Indigènes," p. 33, Paris, 1810) writes: "*Narcissus calathinus* (Linné) is found in the neighbourhood of Montpellier and Avignon, and is synonymous with *Narcissus dubius* (Gouan)"; whilst at page 42 he says, "*Narcissus reflexus* (Nob.) is native in the Glenans," and there he gives probably the first accurate description of the plant, from a sample received from M. Bonnemaizon at Quimper; but in "*Flora Gallica*," p. 723, he says, "*Narcissus calathinus* (Linné) is native of the Glenans," which is in contradiction with the first assertion. However, on his authority the name *N. reflexus* was accepted. Loureiro ("*Flora Lusitania*," vol. i., p. 551) writes: "*Narcissus reflexus* (Loiseleur) is nearly the same as *N. odoratus* (Linné) and is found in mountainous districts at Gerez, near Amaranth. According to "*Index Kewensis*," this is synonymous with *N. triandrus* (Linné). *Narcissus calathinus*, described by Loureiro, is very uncommon; he says it is cultivated in gardens and found in a wild state in mountainous localities of Unhaes and Loriza, and is very similar to *N. odoratus* and *N. tazetta*. Wilkomm and Lang ("*Prodromus Flora Hispanica*," vol. i., p. 153) say: "*Narcissus calathinus* (Linné), synonym *Narcissus reflexus* (Loisel. non Brotero), is much like *N. juncifolius* (Lag.), and is found wild at Goditano, a Spanish town"; but they add, "The true species is found in *Gallia armoracia*." According to "*Index Kewensis*," this Spanish plant is *Narcissus triandrus* (Linné). Redouté, who was a celebrated painter and plant lover, gave two coloured plates of this *Narcissus*. His paintings are generally considered strictly made from Nature, but either these figures were drawn from memory or from wrong specimens, they are not accurate, and do not represent the true *Narcissus calathinus*. In his "*Liliacées*," vol. iii., t. 177, the figure shows a bulb too large, wrongly shaped, the leaves erect and lorate, the flower citron-yellow,

and the corona too short. He adds, the drawing was made from a plant collected in the Glenans, and given to him by M. Bonnemaison, of Quimper; but this must be an error, as I am sure that such a plant has never existed in the Glenans. The second figure (vol. vii., t. 410), given as a variety of the former, is more natural and almost correct, excepting the colour of the flowers and the erect leaves.

Above particulars show the great confusion which has always existed respecting this plant, and I believe that the plant has been seen growing in its wild state by the three late botanists only, viz., Messrs. Bonnemaison, of Quimper, Blanchard, of Brest, and Lloyd, of Nantes.

In conclusion, the following names and synonyms—*Narcissus calathinus*, Delarbre; *N. c.*, Lin. ex. Wilkomm and Lang; *N. c.*, Lin. ex. Redouté, t. 177; *N. c.*, Lin. ex. Redouté, t. 410; *N. c.*, Loureiro; *N. c.*, Loiseleur, all which have been attributed to the true *N. calathinus*—are wrong or erroneous as regards either description, figure or habitat, and consequently ought to be discarded, as well as *Narcissus calathinus odoratus* and *N. c. albus* of catalogues, which can only lead to confusion, and the plant known under the name of *Narcissus calathinus*, Lin.—synonyms, *N. reflexus* (Loisel.), *N. triandrus calathinus* (Hort.), *Ganymedex reflexus* (Herb.).

The true *Narcissus calathinus* (Lin.) has some affinity with the Spanish *N. triandrus* (Lin.), which is often mistaken or sold for it, but the specific characters are so distinct that no mistake is possible. The former has the cup or corona always as long as the reflexed perianth segments, therefore belongs to the group *Magni-coronati*, whilst the latter has the corona always shorter than the perianth, and consequently is of the *Medii-coronati* group; besides, the foliage is more erect and broader in the Spanish plant. The true *Narcissus calathinus* (Lin.) is indigenous in the Islands of the Glenans, about thirty miles off the coast of Finisterre. It grows there on a small granitic island about 100 yards across amongst grasses, and in the interstices of the rocks at an altitude of 6 yards to 10 yards above the sea level, in a sloping spot, protected from the north and east winds; the soil is a mixture of half very light peat and half very fine sea-sand; it has never been found elsewhere. It seems strange, and no one can account for such a small plant being localised on a similar wild spot, but it must be observed that on the west coast of France, a large area of the sea, from Cape Finisterre to the Isle of Noirmoutiers, on a width of about forty miles, is only a few yards deep, and full of rocks emerging above water, which indicates that in remote times this portion of the sea was above water and attached to the French continent, and probably at that time *N. calathinus* was more plentiful and widely spread, unless bulbs of *N. triandrus* might have been accidentally imported into the Glenans in the same manner as the Guernsey Lily, and that the plant, owing to the special soil and climate, has assumed its distinct specific characters; but now, in spite of all controversy, the plant must be considered as a distinct species. *Narcissus calathinus* has a very small round or pear-shaped bulb of the size of a large Snowdrop, with a short neck and brown tunics; the leaves, three or four in number, are dark shining green, very narrow, channelled with two nerves above, erect when appearing, then spreading on the ground, 10 inches to 16 inches long; the stem is erect, terete, slender, 8 inches to 15 inches long, bearing one or two, rarely three, nodding

flowers of self ivory-white colour, produced from an erect spathe; the perianth is formed of six lanceolate, perfectly reflexed segments, the three outer a little larger; the cup or corona is nearly cylindrical, faintly six-lobed on the edge, always as long as the perianth segments (hardly 1 inch); the stamens shorter than the corona, but the style protruding; the flowers are produced about April 20, and last two or three weeks. It is one of the prettiest members of the genus, and may be considered a perfect gem owing to its scarcity; but one must be very careful when buying such a rare plant to get the true species, as bulbs of spurious plants are often sold for it, which has caused many disappointments.

#### CULTURE.

Although this plant has been considered somewhat difficult to grow, it is very easily managed and increased under proper treatment. I have always found that after one or two years' cultivation my collected bulbs greatly improved both in size and vigour. It dislikes moisture more than cold, as a temperature of 10° Fahr. will not destroy it if slightly protected. The best time to plant is September. The best soil to use is a mixture of one part of sandy peat, one part of well decayed leaf mould, and two parts of fine sand. Select a warm, sunny spot, at the foot of a south wall if possible, protected from north and east winds, drain thoroughly, and plant the bulbs 2½ inches deep and 4 inches or 5 inches apart. In winter protect with dry leaves, cocoa fibre, or other material, or cover with a frame until sharp frosts are over; never give any water. If necessary, the bulbs may be lifted at the end of June, but it is safer to leave them undisturbed for years, allowing them to get as dry as possible in summer. In pots plant from four to six bulbs in a well-drained 5-inch pot 2 inches deep, using the same mixture as above. Winter under frame, keeping almost dry until the leaves appear, and never give any artificial heat. When the flowers are over plunge the pots in a sunny border until the soil is quite dry, and do not give any water. This plant likes perfect drainage, sandy soil, and dryness, although I have grown it for several years in pure granitic light soil with perfect success. Sometimes it is grown as a hardy alpine. This plant is easily increased by division of the bulbs and by seeds, which must be sown as soon as ripe in pans, using the same mixture as above. They germinate in two or three weeks. Winter the seedlings in a frost-free frame. The following summer these seedlings may be transplanted or left alone. The strongest will flower the third year. It hybridises well with other sorts.

Unfortunately, the plant is disappearing fast from its native habitat owing to the depredations of fishermen, who lift these plants when they are in bloom with a ball of earth, thus destroying a quantity of small ones. Last winter, during disastrous tempests, the sea ran several times over the island; the soil got thoroughly impregnated with sea water, and a quantity of bulbs was destroyed.

A few years ago I planted some of these bulbs in another part of the Glenans. They have succeeded admirably. This season I have rented the small island where they originally grew, and landing or collecting being strictly forbidden, I trust, in leaving them alone for a few years, the stock will increase sufficiently to satisfy every amateur. D. GUIHENEUF.

48, Rue St. Merri, Paris.

**Carnation The Burn Pink** (pp. 190 and 238).—This Carnation was raised by William

Lawie about twenty-five years ago. So far as I am correct; the rest of his story is erroneous. The Carnation was never named Maggie (or Annie) Lawie until long after William Lawie's death, and the name was never approved by the chiefly concerned, including the present gardener at The Burn, a son of William Lawie. The only legitimate name for this Carnation is The Burn Pink, and this has been acknowledged by the Carnation Society, whilst most growers have been very civil on the mistake being brought to their notice, the only exception being the party referred to by "M." as an "enterprising nurseman," who procured the cuttings unauthorised and advertised the variety as "Duchess of Fife," quite new, 2s. 6d. per plant.—C.

#### VIOLET MARIE LOUISE DISEASED.

TO THE EDITOR OF THE GARDEN.

SIR,—In the issue of THE GARDEN of May 1900, a note of mine appeared respecting the late Violet, which had been a failure here during the previous winter owing to what I presumed was a disease, and soliciting advice and information respecting it, also a remedy, whether I could safely rely on increasing stock from what remained of the affected plants. Several of your correspondents kindly responded to my inquiries, to whom my sincere thanks are tendered. I am very pleased to learn the disease is unknown to most of them. Mr. Crawford May 15 writes to the effect that the culture treatment may be at fault, or some unsuitable ingredient in the soil may be accountable for their deplorable state, and strongly advised obtaining runners from a fresh source. In following week's issue "W. S.," who sympathises with me, as he had a visitation apparently the same malady some years ago, remedy also being a fresh stock. On the same page "D. T. F." attributes it to the presence of gas in the frame from over-fermentation, a carbonic atmosphere, &c., and agrees with the preceding correspondents as to the desirability of an exchange of stock. Before most of the notes alluded to appeared I had planted out my stock. Probably my cultural treatment may be faulty in some particulars, thus causing failure, but I followed on similar lines to those I had practised here for eight years, annually resulting in abundant bloom tending over a long season. I do not winter them on any heating material, but in low pits 1 foot above the level of the soil, having ample drainage and the foliage almost touching the glass. They get no coddling or artificial heat, the lights being placed over them in wet or frosty weather and protected when necessary with Bracken mats. My stock has been but partly replenished. A generous friend kindly supplied me with 1000 rooted runners and old plants. As this number is not quite half my stock (4000), I made up the remainder with the best available of my old stock, which now, however, I believe to be a mistake. Both lots have received exactly the same summer treatment, but anyone can see a difference at a glance between the fresh and the old, for the latter lacks the luxuriance and deep green foliage of the former. As regards bloom, both are about equal in this respect—abundant and commenced flowering the latter part of July. The whole are now being put into pits, but I fully expect the collapse of the diseased lot this winter and have prepared for next year's stock from new-comers, as I trust they will be free from the dreadful malady. The blooms and pale leaves sent you are from the old stock.—J. ROBERT Tan-y-bulch.

\* \* \* As far as the flowers are concerned, we can see very little difference between the two lots, both being excellent, but in the case of the foliage the disease is quite visible, the leaves being pale and flimsy. We should be glad to know how these pale-leaved plants come through the winter.—Ed.

## IRIS GATESI IN SURREY.

ENCLOSE a photograph of *Iris Gatesi* which I think may interest you. The plant was grown on a raised bed of pure road scrapings, the roads being of a sandy gravel. *Iris Susiana* does well in the same position. I have almost entirely carried out Mr. Ewbank's suggestions as to the cultivation of these plants in *THE GARDEN*, vol. xliii., p. 395.

NORMAN RUSHWORTH.

Beechfield, Walton-on-Thames.

*Begonia semperflorens*.—All soils and situations are not suitable to the outdoor cultivation

cient room to develop, they grow into nice bushy plants some 12 inches to 15 inches in height, the different shades of flowers showing to great advantage against the highly-coloured foliage. They are seen at their best on a dwarf carpet of *Mesembryanthemum*, *Manglesi Geranium* pegged and kept close, or dwarf *Ageratum*. They are very easily propagated from cuttings, by division and from seed, and can be recommended for all gardens where there is a quantity of small beds.—E. B.

*Eceremocarpus seaber*.—The hardiness of this plant, judging from some recent notes, is not generally recognised. As a proof that it is thoroughly hardy, I may say that it came safely through the very severe weather of the first

the *Belladonna Lily* which is flowering at Kew, and which far eclipses any variety I have previously seen. It differs from the ordinary kind in the flower-spike being nearly double the height and a great deal stouter, the blooms much richer in colour and far more numerous, as from twenty to thirty blossoms are borne in one head or umbel. It is certainly a really magnificent variety, but as far as I know it cannot be obtained from nurserymen, and it will doubtless be years before a stock can be worked up. Still, it is one of those good things that will be appreciated by everyone.—H. P.

## THE ACANTHUSES.

I was very much interested in the excellent article on these handsome fine-foliaged and flowering plants in *THE GARDEN*, page 239. Nothing can be finer than these when well placed. We generally find far too much bare stonework, bases of vases or columns, or formal terrace walls and buttresses that would be all the better if garnished by the glossy foliage of the *Acanthuses*. Near rocks or stones or sunny walls they seem peculiarly at home, and they all have a peculiar knack of fitting themselves to their formal surroundings. In the College Park at Dublin I have planted all the kinds, and they are thriving even in dry places under overhead balconies and in gravel walks near to walls and buildings, but in such extensive places one can never, as it seems to me, have enough of them. Apart altogether from their own peculiar grace and beauty, the *Acanthus* forms a foil for lighter and brighter flowers, and being evergreen in sheltered sunny nooks and corners, the noble leafage is most suitable for flower vases at a season when foliage is not too abundant. Their propagation is of the easiest kind. Large clumps are readily divided, and I prefer to do this in May or June and during wet weather, when scarcely any check is experienced by the plants themselves. In dividing great masses the thick, carrot-like roots are all collected separately and laid or planted 6 inches deep or so in a broad trench under a warm wall. So treated every bit soon grows and forms a plant before the winter.

In thanking "E. J." for his appreciative notice of these noble garden plants, I send you specimens in flower of the rare and beautiful *A. spinosissimus*, which is much admired here, as it grows on a cinder walk at the foot of a big Ash tree, where it flowers every year. I see Mr. Nicholson gives nine or ten species or varieties and synonyms, but those mentioned by "E. J." are, so far as now known, the best for garden uses. If one kind only be grown, then let it be *A. mollis latifolius*, which has leaves 5 feet high and spikes over 6 feet high when well grown, as at St. Anne's, Clontarf, Co. Dublin, a place that may fairly boast of the finest herbaceous borders in Ireland, even if not in Europe as well. In "Index Kewensis" sixty species and synonyms are given under *Acanthus*. The probabilities are that as in the gigantic *Gunneras*, so also in this genus *Acanthus* there are at least some, if not many, fine species or wild forms worthy of introduction to our gardens. But the epoch of hardy plant collecting has never been fulfilled, and even in the 19th century hardy plants are collected in a desultory and amateurish kind of way.

Will no lover and cultivator of hardy flowers send a good collector to the highlands of the Caucasus, to the higher mountains of New Zealand, to the great snow-capped ranges of N. India, or to the cloud-capped Andes and Cordilleras of Chili and Peru? For the species and wild forms of *Acanthus* at least this would not be necessary, since with one or two exceptions they are S. European or W. Asian kinds. As "doctors are said to differ," so also do authorities as to the colour of the flowers of the rare old *A. spinosissimus* I send you to-day. But as we all know, authorities are often like the proverbial sheep; they follow each other, as can be proven by the copying not only of the truth, but even of clerical



*Iris Gatesi* in Mr. Norman Rushworth's garden at Beechfield, Walton-on-Thames.

uberous *Begonias*; the plants seem to barely exist, instead of making the free, vigorous growth that is indispensable towards a good display, and for this reason the *sempervirens* type is very acceptable, as being invariably thoroughly at home and helping to make bright and attractive beds. Some years ago the small-flowered tuberous *Begonia* *Worthiana* was a first-rate outdoor summer plant. It was, however, one of the first to succumb to the *Begonia* disease, and for the last six or seven years I have been unable to do anything with it. Certainly the different forms of *sempervirens* do not attain to the dimensions of the more vigorous of the tuberous section, and are consequently more suited for smaller beds. Given, however, suffi-

months of 1895 when the thermometer fell 7° below zero. It has been in the same position for about seven years now, and has never had the slightest protection in any form. Seedlings come up by the hundred every spring; indeed, one of the greatest faults the plant has is its freedom in seeding, which makes it necessary to remove the pods every few days during the late summer months. I find the plant a thoroughly vigorous and showy climber.—J. C. T.

*Amaryllis Belladonna* at Kew.—A week or two ago there was a note in *THE GARDEN* calling attention to the grand display of this beautiful bulbous plant to be seen at Kew. In the note just alluded to no mention is made of a form of

or printers' errors. Nearly all the books state that the flowers of *A. spinosissimus* or Hedgehog *Acanthus* are rosy in colour. Those sent to you are sometimes nearly pure white; indeed, I know of no other *Acanthus* having white flowers.

F. W. BURBIDGE.

#### DOUBLE VIOLETS FROM CUTTINGS.

ALTHOUGH a few growers annually raise their stock of such double Violets as Marie Louise, Neapolitan, and Comte de Brazza from cuttings, the majority of gardeners still continue the old practice of planting out ordinary runners which the parent plants produce while yet in their winter quarters in frames and pits. The latter plan I still believe to be the best from a quantity point of view, plants raised from cuttings and kept to a single crown producing fewer, though finer blooms. About the superior size and quality of blooms grown on the latter class of plants I have not the slightest doubt, some of the very best I have seen being at Blickling Hall. Mr. Sawyer at Elston Hall, near Newark, also grows magnificent Violets, and I fancy this method of culture suits the old Neapolitan even better than Marie Louise. The plan at Elston is to take off the cuttings in March, pricking them into light, gritty compost in a frame standing on a mild hotbed, and as soon as rooting takes place air is increased and the plants gradually exposed to the atmosphere. By the beginning of May they are in good condition for removal to their summer quarters, and when growth commences in earnest, a good stout crown is selected, all others being removed and all runners closely cut off. The foliage under this treatment is large, dark coloured and leathery, provided of course that watering is properly attended to to keep down spider. Violets are often, through press of work, left out in borders later in autumn than they should be, consequently do not get established in their new quarters early enough. This makes all the difference to the supply of bloom during winter. As a rule, particularly in midland and northern districts, the end of September, or at the latest first week in October, is late enough for placing the plants in frames.

J. CRAWFORD.

**Myrtles in tubs.**—In reference to Mr. Easter's remarks in a recent issue about Myrtles in tubs, we have here four growing in square tubs, their height being 12 feet from the bottom of the tubs, and the plants are 10 feet through. Two of them have been in full bloom for the past three weeks, and being covered with their lovely white flowers, have been much admired by all who have seen them; the other two are just coming into flower at time of writing. They are put to the same use as Mr. Easter's during the summer months, being stood by the side of a path with Orange trees in the same sort of tubs, and have large vases of Geraniums between them. The greatest drawback to such plants is the housing of them during the winter months, as they take more room than many can find for them.—H. BEAN, *Betteshanger Park, Dorset.*

**The Snapdragon.**—Plants of *Antirrhinum* raised from seeds sown at the end of last summer and planted out in the spring quickly grew into size, and gave an abundance of bloom from the main shoots. Then came the summer spell of dry weather, when the drought so affected them that they ceased to flower for a short time, but with the rain came an abundance of side shoots, and they are now producing spikes of bloom most abundantly. I have bushes which are 3 feet through and bearing dozens of spikes of bright flowers. They supply plenty of cut bloom just as summer is gliding into autumn and when we most need it. I do not expect to keep the plants through the winter, and do not desire to do so, as I have young ones to take their place. The early spring-sown *Antirrhinum* are now getting into fine flower. The great majority of these will pass

through the winter in safety, unless the weather is unusually severe.—R. D.

**Scarlet Lobelias.**—It is unfortunate, so far as these beautiful hardy flowers are concerned, that they do not produce seed in this country. There are the flowers and organs of fertility, but apparently pollen is lacking. Were they seed-producers, how rapidly might even the beautiful varieties that we have now be improved and varied in colour, whilst how much more easily might plants be increased. I have just been admiring that lovely variety *Carmine Gem*, and although there are already evidences of new growths from the roots, the hoped-for seed produce is not found. It is interesting to find that these plants are again so popular in gardens. The *Victoria* variety I saw in several gardens recently, though perhaps nowhere in finer form than at Bickton, Devonshire, where Mr. Mayne uses it largely, especially for dotting in beds of silvery *Pelargoniums*. He has plants that carry half a dozen flower-stems, and so grown it is very effective. Once a good stock is obtained, of course propagation may go on rapidly by division of root growths. In cold or wet soils it is wise to lift the roots and get them into boxes of soil or large pots singly, just keeping them cool and moist, without unduly exciting growth or over-watering. So far down as Devonshire doubtless the plants are perfectly safe during the winter, and even may stand very well higher up, but ordinarily it is best to have them under cover of some sort for the winter. Seed can be produced on the Continent, but it is rather dear. Still, good seed sown properly should always well repay the outlay, as some diversity in colouring may be hoped for.—A. D.

#### NOTES ON HARDY PLANTS.

**Viola obliqua.**—Why is not this species much more used where good flowers (practically true Violets) are wanted. Nothing as a plant could be harder, and it can take care of itself for half a dozen years or more without any cultural attentions. This is soon explained, as its root habit is quite distinct. The roots are a sort of half fleshy rhizome and half tuberous or knobby. Thus the plant can be found after many years exactly at the same place where it was originally planted, *i.e.*, there are no bounding stolons and no smothering of neighbouring flowers. The leaves are each 3 inches to 6 inches across, with stalks over a foot long.

**Polygonatum verticillatum.**—Now that the tops of this tall and distinct Solomon's Seal are turning a bright yellow, with the leaves still held at right angles with the almost erect stout stems, the bright scarlet berries (also just at their best colour) are best displayed for autumn effect. It may be stated that the leaves are in more or less distant whorls, as in the case of the Panther Lilies, and not in pairs, wing-fashion, as on most of the genus, and the berries being in whorls, too, immediately at the junction of leaves with stem, their effect just now is that of a string or ring of coral beads loosely hung round the stem at every set or whorl of foliage; stature 3 feet; a splendid waterside plant.

**The Skunk Cabbage.**—It appears this is not much known, and this name is not likely to lead to a correct conception of what the plant is really like. As the plant is now being more employed in company with other bog subjects a note may be of use. It is really as beautiful as it is singular, but it is no Cabbage as we know Cabbages, but an Aroid, called *Symplocarpus fetidus*. It has big leaders of 1 foot to 2 feet, and a robust habit when near water. Culturally, it may be termed a bog plant, and prefers peat. It is perfectly hardy and attractive to look upon when seen in a mass and doing well, but it should not be placed too near a path owing to the fetid odour implied by its common and scientific names.

**Primula Forbesi.**—This charming species has been flowering all summer in a moist position, but never have its flowers been so large or so deep in colour as now. Plants stood several degrees of

frost without harm in very sandy soil, but I have not yet tried it in the open all winter. Anyhow it flourishes and flowers outside all summer and nearly the end of the year plunged in damp cocoa fibre or short rotten peat.

**Dianthus Knappii.**—I venture a further note on this, as it seems to be quite a late bloomer. The flowers are larger and of a richer yellow than earlier in the season. Its hardiness is beyond doubt, and what is equally a good feature, it robust without being coarse.

**Pheasant Grass** (*Opera arundinaria*).—This most beautiful out-of-doors now. It is, however one of those things to be seen to be known. Scarcely can one do justice in words to the grass part of the plant even by the aid of the name which so justly hints at the rich colours, but is impossible to convey an idea of the loveliness of the sprays of bloom, so long and elegant. The grass should be noted by all who are fond of choice material for vase decoration. I have tried it the open, it stood last winter without the loss of a single plant, which is more than I can say for batch kept in a cool greenhouse. I could imagine nothing more seasonable and decorative as a tall plant.

J. WOOD.

Woodville, Kirkstall.

#### TAKING UP AND STORING DAHLIA ROOTS.

SINCE the mild weather during the two last weeks in September set in, Dahlia plants of all types have made a free growth and bloomed freely. There is no knowing how soon a frost may come. Last year the plants stood unharmed until about the middle of October, the weather being mild and open, as at present. The Dahlia is a tender plant and very susceptible to frost. As soon as the young growths become blackened by the frost, rapid decay sets in, and in two or three days most the main stalk should be cut away to within 9 inches or so of the ground. If the weather keeps fairly open, the roots may remain in the ground for a time longer, and then advantage should be taken of a sunny, drying day to cut the roots up. By using a pointed stick, get rid of a good deal of the soil adhering to the roots, and then turn them upside down on a garden mat, so that any moisture can drain from the hollow part of the stem, and also dry out of the soil remaining on the tubers. If left in the open for a night or two, they should be covered securely from harm by frost.

Another point worth attention is to see that every variety is securely named. It is usual with many growers to tie to the top of the stake supporting the main stem of the plant a wooden label with the name of the variety upon it. The label should be securely fastened to the root by using flexible wire, as the loss of a name is sometimes annoying. When the roots are sufficiently dry to be housed they can be placed in a dry shed or outhouse, uncovered on fine days, until an external moisture is got rid of, and when winter should be out of the reach of frost.

There are various ways of preserving Dahlia roots during the winter. Some dry them roughly and stand them on cool, airy shelves from the inroads of frost, but here rot will afflict them, some sorts being much more difficult to keep than others. On the other hand, some place them on the floor of a warm house under the plant stages, and though drip falls upon them they yet come through the winter in comparative safety. Some place their roots on shelves and cover them with dry sand, others hang them in a cellar, they are also put into boxes with sand, sawdust or cocoa-fibre. Let them be kept from frost and damp, and then there need be little fear as to their wintering in safety. But whatever way the roots may be stored for winter let them be thoroughly dry when put away; put away damp there is always danger from rot.

R. D.

**Exhibiting Cactus Dahlias.**—At a recent exhibition of the Midland Counties Dahlia show

TREES AND SHRUBS.

HYDRANGEAS.

THE striking panicles of *Hydrangea paniculata* and its variety *hortensis* have during the past month or six weeks been the most prominent features among hardy shrubs. In the home counties this is the most valuable of the Hydrangeas, but in the south-western counties in Ireland, and in places with a similar climate, the old *H. Hortensia* is the most beautiful. Quite recently I have seen it very finely in flower in various parts of Ireland, and a few years ago I noted it as one of the most effective of autumn-flowering shrubs in Cornwall. In

our less favoured districts further north it is chiefly known as a cool greenhouse plant, and it is only occasionally that it flowers with anything like its natural freedom. There are, however, several other species which are well worth growing and which are perfectly hardy, although none of them can be said to equal either of the species just mentioned.

The greater proportion of our hardy species comes from Japan, but they are found also in China, the Himalayas, and in North America. The most noteworthy characteristic of the flowers is that they are of two kinds—the one large and showy but sterile, the other fertile and seed-producing, but small and comparatively inconspicuous. In the wild specimens the showy, sterile flowers are, as a rule, confined to the margin of the inflorescence, but under cultivation there is a tendency towards their increasing at the expense of the others, and in some varieties the whole inflorescence consists of these showy abortive blossoms.

Of their cultural requirements little need be said. Their chief wants are a free open soil of good quality and plenty of moisture. The plants bear

pruning well, and several of the species, when cut back pretty hard in spring and the young shoots subsequently thinned, produce much finer racemes and foliage. The *Hortensia* group, however, breaks freely from the base, and all it requires is an occasional clearing out of old stems.

**H. HORTENSIA.**—The specific name of this shrub, which so frequently is transformed into "hortensis" even in works of authority, is really an old generic name given to some of the Hydrangeas by Jussieu in honour, I believe, of Queen Hortense. The species has never been found in an undoubtedly wild state, but is one of the plants the Chinese and Japanese have cultivated from time immemorial, and it was from China that it was originally introduced to the King's garden at Kew towards the end of the last century by Sir Joseph Banks (according to Loudon). The accompanying illustration shows admirably how beautiful and striking a plant it is. The flowers

Wellingborough, *Cactus Dahlias* were shown on boards in the same manner as the large showy fancy varieties. As large, well-developed blooms were staged, they were really very attractive, and they appeared much less formal than did the larger flowers of the show type, and they were altogether more varied in colour, as well as showing considerable range of variety in form. Such a method of exhibiting is desirable to the part of those who grow only limited collections and who might find it difficult to get six or three blooms of a variety. That the culture of *Cactus Dahlia* is rapidly extending there can be no doubt. The present season has witnessed the production of more new varieties than any previous one, and now improvements in the habit of growth, in freedom of blooming, and strong,

*Eucalyptus globulus* had flowered during the summer, which is, I believe, an unusual occurrence in England. The fine and symmetrical specimen of *Paulownia imperialis*, 30 feet in height, had blossomed in the spring, and a cutting taken from the same tree is now 12 feet high. The small sheet of artificial water, which in my first notes on this garden (p. 383, vol. xlix.) I mentioned as being in course of construction close to the Bamboo plantation, is now finished, and is already a further attraction to the beautiful garden. At its margin a colony of Bulrushes was flowering, Gunneras, *Eulalias*, *Arundos*, and *Dracenas* adding their beauty of form to the picture, while large clumps of the vivid-hued *Tigridia grandiflora* and of the orange-scarlet *Montbretia Pottsi* brightened the scene with their high notes of colour. I



*Hydrangea Hortensia* bearing nineteen flowers in a 12-inch pot at Holmdale, Leicester. From a photograph sent by the Rev. W. Bell, Knighton Rectory, Leicester.

flower-stems thrown well above the foliage in necessity.—R. D.

NOTES FROM ABBOTSBURY, DORSETSHIRE.

OPENING to be at Weymouth during the last week in August I took the opportunity of renewing acquaintance with the attractive sub-tropical gardens of Abbotsbury Castle. The large bushy rather tree, of *Clerodendron trichotomum*, a representation of which appeared on page 320, *foli.*, was in full flower and scented the air for miles around, and *Oxydendron arboreum* was also in blossom. A fine specimen of *Catalpa bionoides*, some 30 feet high, at the side of which stood an Evergreen Beech, was in good bloom, and large bushes, 8 feet in height, of *Hiscus syriacus*, both the white and purple variety, were smothered in bloom, as were the double Myrtles, of which there was a goodly array at the sides of the wide grass walks.

should hardly have thought the margin of a pond a situation best suited to the needs of these two flowers, but never have I seen such vigorous examples of either as I did here. The lowest-planted clump of *Tigridias* was nearly 3 feet high and bore enormous flowers, while some of the *Montbretias*, whose corms were almost at the water-level, had thrown up great leaves almost as wide as those of *Gladiolus brecheleyensis* and correspondingly long, and were flowering grandly. I had always been of opinion that *Tigridias* and *Montbretias* did best in a dry soil, but at Abbotsbury their abnormal vigour is apparently due to the exact opposite. *Montbretia crocosmiflora* is also grown, and, in the neighbourhood of the water, *Cyperus natalensis*, the Tree Tomato (*Cyphomandra betacea*), and the Japanese Wineberry were to be found, with many fine *Hydrangea* bushes in full bloom, *Pampas Grasses*, *Bocconias*, and flowering *Clematises*, while on the trunk of a tall Palm the climbing *Rhodochiton volubile* was blooming. S. W. F.

are usually of a pale pink colour, but under certain conditions and in certain soils they are blue. The exact cause of the change has not been clearly ascertained, and has been variously ascribed to the presence of iron, potash, or alum in the soil. Although usually killed to the ground each winter near London, it is never destroyed outright. After unusually mild winters it will sometimes flower. The following are the more noteworthy of its numerous varieties: *Otaksa* has sterile flowers at the margin of the corymb only; it probably approaches the true wild type of the species more nearly than any. *Var. nigra* has very handsome purplish brown stems. *Var. Thomas Hogg* is a very valuable plant for indoor cultivation, having pure white flowers. *Var. Lindleyi* (figured in THE GARDEN for December 1, 1894) has only the marginal flowers of the corymb sterile; they are pale rose. *Var. japonica rosea* (coloured plate, GARDEN, August 15, 1896) has also pale rose flowers, but the whole of them are sterile. *Var. stellata* has the segments of its sterile flowers frequently toothed.

*H. PANICULATA* is a Japanese species of robust growth and perfect hardiness. Its leaves are ovate, each from 3 inches to 6 inches long, and they are frequently borne in threes at each joint, instead of the usual pair. The flowers are produced on huge erect panicles, and in the typical plant the great proportion of them are fertile, but in the variety *hortensis* (or *grandiflora*) the whole of them have become sterile, and each flower consists of four petal-like segments—really a development of the calyx—and nothing more. These panicles are naturally about 8 inches long and of pyramidal outline, but under high cultivation, when grown in rich soil and the shoots reduced considerably in number, they may be obtained as much as 1½ feet long and of proportionate width. The flowers are white at first, afterwards pink, and lastly pale brown. It was introduced in 1874.

*H. PETIOLARIS* (*scandens*) is a climber and a native of Japan. It is perfectly hardy, and at Kew is grown on a large tree stump, which it has completely covered. Its habit makes it interesting, and its luxuriant growth renders it handsome, although it does not flower very freely out of doors. The corymbs are large, but with only a few flowers of the sterile kind, and these of a dull white. In Japan this *Hydrangea* climbs the trunks of trees such as the Ivy does in this country, covering them up to a height of 60 feet or more. It may also be grown on a sunny wall, where it will flower more freely. Two other Asiatic species that may be briefly mentioned are

*H. PUBESCENS*, a very strong-growing shrub with narrow, pointed, finely-toothed leaves each 3 inches to 5 inches long, and large flat corymbs produced at midsummer, the flowers of which are white at first, afterwards rosy; and

*H. THUNBERGI*, a rare plant of dwarf stature, with small leaves and corymbs 3 inches in diameter, whose flowers are sometimes pink and sometimes blue, the species evidently being subject to the same influences as *H. hortensis*. The North American species are not such valuable shrubs for the garden as the Asiatic ones. The most ornamental of them is

*H. QUERCIFOLIA*, a native of the Southern United States, and, unfortunately, not so hardy as could be wished. In hard winters it is always cut back more or less. The foliage is very distinct and handsome, the large leaves being deeply lobed and unlike those of any other species. The flowers are borne in large erect panicles, the barren ones being white. It should be given a well-sheltered position, and the soil should be deep, rich, and moist, so that the leaves may be developed to their fullest size.

*H. RADIATA* is of no particular merit as a flowering shrub, producing dull white flowers; but its leaves, on the other hand, differ from those of any other *Hydrangea*, being of a beautiful bluish-white colour underneath. The species is often grown under the name "*nivea*," which refers to the snowy whiteness of the leaves.

*H. ARBORESCENS* is a strong grower with large coarsely-toothed leaves of quite a brilliant green, but it has no value as a flowering plant. The flowers, of which only a few are sterile, are of a dull white. It is a variable plant, and between it and *H. radiata* there are several intermediate forms, some showing a whiteness beneath the leaves, but never of the purity of the true *radiata* or *nivea*. W. J. B.

#### SHORT NOTES.—TREES AND SHRUBS.

*Eueryphia pinnatifolia*.—This has been flowering finely here the last six weeks. It has been growing on a sheltered bank for eight years, and is still doing well.—J. TAYLOR, *Hardwicke Grange*.

*Cratægus Pyracantha*.—In the Fulham recreation ground, where the conditions are none too favourable, there are numerous bushes of the *Pyracantha* from 4 feet to 6 feet high and as much through which are profusely laden with their brightly coloured berries. They are disposed at regular distances along a belt of shrubs, and in this way they form brilliant patches of colour. The *Pyracantha* is so generally seen and so universally admired as a wall plant, that its merits when grown in bush form are apt to be overlooked. It should, however, be more often planted in this way, as it is of a neat, yet free habit of growth, while the little flattened clusters of white blossoms are earlier in the year decidedly pretty.—T.

### KITCHEN GARDEN.

#### SUMMER CAULIFLOWERS.

MR. TALLACK points out the value of Cauliflower Eclipse and I am sure those who need this vegetable during the summer months will do well to adopt the advice given. It is an excellent variety and the heads are of just the size for home consumption. Market growers may not think it good enough. The value of Eclipse is its good qualities in dry weather at a season it is difficult to get Cauliflowers worth cutting. In many gardens summer Cauliflowers are not needed, but in others they are in constant demand, and though there is a wealth of Peas, Beans, and other choice vegetables I find good Cauliflowers are much liked and daily required. For years I grew the true Walcheren to give a summer supply, and it rarely failed. As Mr. Tallack observed, Eclipse is more compact than Walcheren for summer supplies; I mean during July and August or for earlier use. To follow the Broccoli in May and June I still rely on Walcheren. The value of Eclipse grown in summer is its mild flavour. I am aware Autumn Giant may be had at the season named, but with me the heads are strongly flavoured if cut before the middle of September.

There are other excellent varieties for early summer use. I find the Pearl a good variety to follow the late Broccoli. Pearl is earlier than Eclipse and by sowing these I get a succession; indeed, I make two or three sowings of Pearl, one in frames in February to give heads early in June, another in the open early in March to form a succession, and a later one if needed. If Eclipse is sown in March it will give a July, August, and September supply by making two or three plantings. A few years ago I paid great attention to summer Cauliflowers, having some half dozen varieties from the Cape and Italy, but none were equal to our own kinds. A few were early, but lacked the pure white curd and compact habit of Pearl and Eclipse. Snowball is one of our most useful kinds on account of its quick growth, but I class it as a late spring Cauliflower, as sown in heat in the early part of the year it will mature early in May. It is one of the best to take the place of the Broccoli should the latter fail or run short, as it may be had in three months fit for table. A summer Cauliflower which never fails is *Magnum Bonum*. This appears to me to be distinct from Walcheren

and superior for summer. It is larger than Eclipse and one of the best for affording a supply from June to October. It is a broad-leaved variety, but the head is well protected by the leaves. I do not know of any variety which keeps so long after being fit for table. This variety is very sturdy and is equally good in tropical weather as in more favourable seasons. I do not advise it for first crop, but as a summer variety especially in soils where Cauliflower does not always thrive. In my light soil it never fails. In heavy soils it is well to pay attention to the selection of summer Cauliflowers, and I have found Eclipse and *Magnum Bonum* the best. On the other hand, in poor land, it is necessary to grow vigorous kinds in hot, dry seasons, as the first earlies button at times and a crop is lost. Even this last season, with every attention to keep up a good supply, I was obliged to milk freely. I found it an excellent plan to give the surface-soil a good covering of spent Mushroom manure. This I obtained from a large grower at a small cost, and it was a great saving. A thorough watering once a week kept the plants growing freely. Few vegetables find drought sooner than Cauliflower, and if the plants are checked they soon become a prey to caterpillar, and take on a bad colour. I do not advise at getting large heads, but those with a compact white curd. The four varieties named are all good grown to form a succession. Doubtless other growers may have found others quite as reliable in diverse soils, and some may like larger kinds. G. WYTHES.

*Potato Syon House Prolific*.—I think "H. C. P." (p. 221) must have made a mistake when he classes *Syon House Prolific* as a variety. I am pleased to see the writer's comments on the same. I note on the same page Mr. Tallack writes favourably of this variety as its free-cropping qualities. This Potato was introduced last year. I am more pleased with this year than last, as I regret to say my *Potato* crop is a poor one in the case of some varieties. *Windsor Castle* was grand and *Satisfaction* excellent, but not so even as usual, some of the tubs being very large. My best cropper is the one in question, and though in this case there are coarseness, the general quality is good and quite free of disease. Though a late Potato, it boils fast as soon as lifted. My *Magnum Bonum* this year is poor. This I much regret, as it is my favourite and the seed was new and planted early. A few other older kinds are light crops. The new *English Beauty*, a very early kind, came in just in advance of *Windsor Castle*. The whole I do not think the *Potato* crop will be a heavy one. Drought crippled the plants in their early stages, and with so much rain disease will be prevalent in clay soils.—GROWER.

*Disease in Kales*.—At a recent meeting of the fruit and vegetable committee at the Royal Horticultural Society's gardens, Chiswick, I was grieved to see some Kales much diseased. The plants some two months ago were much admired for their splendid leafage. Many at first sight would think that the roots were attacked by disease, but this is not the case, and I am penning this note hoping that some readers may give us some information how to combat the disease. At *Syon* the Kales, though not quite so bad as at Chiswick, are suffering from the same disease. I have tried various remedies all to no purpose. The roots are strong and clean, but the leafage is badly attacked by a kind of mildew or fungus, which curls up and withers. The plants lose their centres, smell badly, and present a miserable appearance. They first showed the pest in June, and I hoped with a good rainfall later they would grow out of it, but the reverse is the case. They are much worse; in fact, a few rows have been destroyed, as the plants looked so unsightly. Another curious point is that the disease or fungus only affects the very latest kinds, such as *Bude* or *Asparagus*, the *Cottager's Kale*, *Ragout Jack*, *Chou de Milan* and similar kinds.

otch Kales adjoining are quite free. At Wiswick the land was new for the crop, at least I did not had a similar crop for years, and I think various remedies have been tried in the way of plates and dressings. A late sown and planted appears to have escaped, and some may say, why not rely on such plants? but they are too small to give large supplies. I think the evil is owing to drought in the first place. It is a loss, these late Kales are so valuable during March and April, and produce so freely.—G. WYTHES.

**Beet seed.**—"A. D." (p. 221) may easily be wrong as to his surmise that the mixed seed he sowed was due to negligence or want of care after sowing. For many years I have been in the habit of saving seed from a selected stock, and the result is not always what it should be in spite of every care being taken in isolating the seed-bearing roots. In some years the plants come perfectly true; in others a small percentage of Mangolds comes with them, and it is curious to note that the latter are of a red or yellow type according to the kind of Mangold grown for seed in the neighbourhood the same year, though none are grown within a quarter of a mile of the garden. Of course, this is due to cross-fertilisation and not to the seed being mixed after harvesting or to wrong roots being saved for planting. Last year the percentage of Mangolds was higher than I had ever known it, while this year the case is entirely different. When one comes to think of it there is no cause for wonder at this being so, for the farmer who is saving Mangold seed may have just as good reason to complain of the gardener's Beet as the gardener has of the Mangold. The one thing I do not understand in the case is why the Mangolds were not pulled out at an early time. They can easily be seen, and will be much advanced in growth beyond the garden plot at that time, so the only excuse for their being left would be too thin sowing. Beets are easily transplanted that there is no excuse for mixed lot being grown on through the season if only a fair quantity of seed was sown, so that late would be available for filling gaps by sowing out the bastard plants. The stock itself is uninfected by these rogue plants, the percentage of which is never large.—J. C. TALLACK.

#### CABBAGE SPROUTS.

Though "J. C. T." (p. 221) thinks Cabbage sprouts superior to young Cabbage, his note does not convince me of their superiority. Growing of Cabbage stems to produce sprouts is not an advance in the right direction. We have now such excellent quick-growing varieties that it is not worth while to keep an untidy bed of old stumps cut from. I may be told they can be kept dry. They rarely are in many gardens, and in some cases the old stumps remain well into the second year, being cut over and over again. This is not gardening. I would ask "J. C. T." if such produce is worth sending to table? I do not think much of it would be appreciated in the dining room, and my contention is, that by growing young Cabbage the ground is better occupied and the quality of the Cabbage is superior. I admit it is a practice generally followed, and old cabbages die hard. I think we may with advantage follow a regular system of cropping and clear the ground, as when good autumn Cabbage can be grown in a few weeks there is no need to leave old plants to produce a second crop, when the time is taken into account the plants have occupied the soil. My plan is to give the soil a change as soon as possible. Vegetables, like individuals, need change of food. Summer Cabbages after heat and drought are not free from insect pests, and if sown there is less fear of adjoining crops being attacked. With an ample supply of Coleworts I fail to see the need of old Cabbage sprouts. I do not think the comparison made between Brussels Sprouts and Cabbage a happy one, nor would I think of destroying Brussels Sprouts if they had matured the crop. When Cabbage has matured one crop, why demand a second and what is the soil? I have for some years taken

special measures to prevent grub and destroy insects. To this end I find it advantageous to clear crops as soon as possible, and, in the long run, I am the gainer both in quality and, I may add, quantity, with freedom in a great measure from insects. Another strong point is neatness, and I think we cannot overlook this latter, as it is an important one. I do not think "J. C. T.'s" point with regard to labour needs much comment. Cabbages are planted so quickly with certain success, even in dry seasons, that there will be less cost in the end. The young plants in clean ground will give little trouble after planting unless in very dry weather watering may be necessary. S. M.

## STOVE AND GREENHOUSE.

### GLORIOSAS AND THEIR CULTURE.

THE genus *Gloriosa* (so named by Linnaeus from the superb colouring of the flowers) consists of two species of annual, tuberous-rooted, climbing liliaceous plants, natives of the tropical parts of Asia and Africa, and named *Gloriosa superba* and *G. simplex*. These, although introduced into cultivation many years since, are not often found in gardens, possibly because they are old-fashioned plants, but being neither costly in price nor very difficult to grow, they deserve the attention of all amateurs who are seeking for handsome flowers.

**GLORIOSA SUPERBA (L.)**.—A native of Malabar, Ceylon and Nepal; introduced in the year 1690. Stem from about 7 feet to nearly 10 feet long. Flowers pendent, of a fine orange or yellowish red colour, golden yellow at the base, with six reflexed divisions which are very much crimped and undulated at the margins, blooming from July to October, and remaining persistent on the flower-stalk after they have withered. Each flower continues a long time in good condition and presents different shades of colour as it advances in age.

**G. SIMPLEX (L.)**.—A native of Mozambique; introduced in 1823. Similar to the preceding species in habit of growth, but with longer stems. Flowers of a greenish-yellow colour, with a yellow claw; the margin and extremity of the divisions of the corolla are also yellow and are not crimped, but are slightly undulated. The variety *G. simplex Planti* (Loud.) has reddish-yellow flowers, and *G. grandiflora* (Methonica grandiflora) is a form of it which has very much larger flowers. Miller, in his "Gardeners Dictionary," mentions a species named *G. cerulea* with blue flowers, but he adds that no one of his acquaintance had seen it in flower. Is anything now known about this species? Up to the present *G. superba* is the finest known species.

Gloriosas are tuberous-rooted plants with an annual growth, which require to be replanted after a certain period of rest. At the commencement of the new growth the repotting and multiplication of the plants are carried on simultaneously. At the end of the growing period the tuber that was planted will be found to have produced two other tubers, having disappeared itself by absorption into the new tubers. These two tubers are then to be divided and planted with the lower end uppermost, a peculiarity of the *Gloriosas* being that the new growth is made from the lower end or bottom of the tuber. When dividing the tubers, the cuts should be sprinkled with fine-powdered charcoal. It occasionally happens that the old tuber will produce only one instead of two fresh tubers, and, contrary to what is stated in books which treat of the culture of *Gloriosas*, I have never found any bulbils at the base of these plants. As regards the

### CULTURE.

In February the roots are potted in low-sided pots or pans (such as are used for *Caladiums*) of suitable size or, preferably, in flat seed-pans, in which the roots are placed horizontally, one root in each pan; the potting soil should consist of fresh heath soil alone, or else leaf-soil and the pans should be well drained. The roots should be placed so that the part from which the stem will issue may be at the surface of the soil or very slightly covered by it. A slight watering is given, after which the surface of the soil is covered about half an inch deep with live *Sphagnum*, which is to be kept in a moist condition by occasional slight waterings. The pans are then removed to the propagating house where they are given bottom-heat by plunging them in the tan or ashes of the frame over the hot-water pipes. The only attention they require is to keep the soil moist, and the layer of *Sphagnum* is almost always sufficient to do this until the growth commences. This is rather capricious in making its appearance sooner or later. The stem as it issues from the soil is leafless for a considerable portion of its length and grows more rapidly in proportion to the higher temperature of the house. It should have the support of a stake when this becomes necessary, and the plant should be more frequently watered as the growth progresses. The pans in which the roots were planted cannot long supply sufficient food to the plants, which should be repotted as soon as the rootlets become abundant. In repotting it is necessary to be careful, as the roots are very sensitive and suffer much when they are disturbed. It is best to use pans from 10 inches to 16 inches in diameter and from 6 inches to 10 inches deep, according to the strength of the plants, placing the roots in a slanting direction in a compost formed of one-half fresh heath-soil or leaf-soil, one-fourth well-decomposed hotbed material, and one-fourth vegetable mould, all well mixed together and prepared beforehand. It is advisable to mix a little sand with the compost. In removing the plants from the pots great care should be taken, and this operation will be more easily effected when the roots have been started into growth in small-sized pans.

The plants when repotted are watered and then removed to the warm house where they are to complete their growth, and for some time after they have been repotted moderate watering is advisable, and this is to be increased gradually. The stem, growing rapidly, must be supported by a stake, and cords running parallel to the glass of the house must be arranged so that the tendrils of the plants may take hold of them and so help to support the stem. These cords should be placed at a distance of from 6 inches to 8 inches from the glass. The plants may also be grown on trellises or other supports. If it is desired to grow these plants in a cool house in summer, this may be transformed into a warm house by admitting as much solar heat into it as possible, and, if necessary, giving a little fire at night to prevent too great a lowering of the temperature.

Further attentions consist in keeping the soil in a proper condition of moisture, and giving once a week a watering of liquid manure, composed of night soil and cow manure in a 10 per cent. solution. The training of the stems should also be attended to, tying them here and there with strips of raffia. Flowering commences in July and continues until October. I have remarked that the plants bloom much better in houses where there is a free circulation of air than they do in houses where the atmosphere is moist. The reek or steam from fermenting materials should be avoided, and also syring-

ing, which spots and spoils the flowers. Two interesting particulars should be noted: the flowers being marcescent, it is a good plan to pick off the faded corollas, which otherwise would detract from the appearance of the plants, and unless it is intended to gather the seeds, it is best to remove the flowers entirely as they wither. In well ventilated houses impregnation of the flowers sometimes takes place naturally, but they can be easily impregnated artificially on a fine day. The seed takes a rather long time to ripen, and should not be gathered until the seed-vessel opens of itself and the seeds are of a deep red colour. Once the plants have perfected their growth and are in full bloom, they should only be moderately watered. As the flowering approaches its termination watering is still further diminished, and should cease entirely about the first week in October. The stems of the plants are then to be cut down to 3 inches or 4 inches from the soil, and the pans are to be placed on the hot-water pipes in a warm or a temperate house, where they are kept dry until the following February, when growth recommences and re-potting takes place. Raising plants

#### FROM SEED

is easy enough, but is tedious in its results, as it takes five or six years before a seedling plant comes into flower. The method, however, is as follows: The seeds, which are pretty large, should be sown from January to March in a hothouse or on a hotbed in good-sized pots or pans (6 inches or 7 inches in diameter) and about half an inch deep in the soil, with a distance of nearly an inch at least from seed to seed. They germinate pretty quickly and regularly, but the young plants cannot be pricked out during the first year. Pots of seedlings are kept undisturbed through the winter, and in the following spring each root is potted off into a small pot of a size suitable to the strength of the root, which is afterwards re-potted like a grown plant. The stems of young seedling plants do not begin to climb before they are two or three years old.—JULES RUDOLPH, in *Revue Horticole*.

**Cupressus torulosa as a pot plant.**—This elegant little conifer is wonderfully well adapted for growing in pots for room and conservatory decoration. For mixing with flowering plants in ornamental baskets it is also most useful. Of easy culture, and, of course, very hardy, it succeeds well in a good stiff loamy compost, given a firm root run and well-drained pots. Small plants will, if assisted with manure water occasionally, remain in good condition in  $4\frac{1}{2}$ -inch and 6-inch pots for several years.—C. C. H.

**Rooting double Primulas.**—It is not always so difficult to induce double Primulas to send out tiny rootlets into the compost with which they are earthed up in spring as to get them to take a free hold of the new soil when detached and potted off. If the weather is bad a cold frame does not always suit them, the weather even in June sometimes being anything but warm and genial, and an airy greenhouse not just the right medium. A friend of mine who succeeds with double Primulas always makes up a small hot-bed of leaves, and gives the newly-potted double Primulas the benefit of it. He does not plunge the pots, but merely stands them on the surface of the bed, taking care to admit a little air almost continually in order to allow of the escape of superfluous steam. In this way he usually manages to root 90 per cent. of the plants.—C. C. H.

**Solanum jasminoides.**—The flowers of this charming creeper are freely produced, and very useful at this time of year. In general it is grown

as a greenhouse creeper, and has a pretty effect trained across the principal rafters of span-roofed houses, the flowers being allowed to hang down in a natural way. In favoured localities of course it may be grown outside. I saw several fine plants of it at Kings Weston in August, where possibly the proximity of the Severn has something to do with its thriving condition. There are also plenty of conservatories with high and bare back walls that this plant would cover rapidly and be very useful. I once had a fine plant on a conservatory roof, and the border for this was about 2 feet deep to the drainage, which was carefully laid. Three parts of loam, one of decayed horse manure, one of leaf mould, and plenty of charcoal and rough sand were the compost used. After the plant had covered the space the shoots used to hang down a couple of feet or more, and these after flowering were either laid in in vacant places or cut back, and the effect of the large clusters of pure white blossoms was remarkably telling. Wherever such positions as those noted exist, then I would strongly advise the planting of this Solanum, for the effect of the plant is certainly not to be judged by the miserable, starved specimens one often sees in hot, dry greenhouses. It must be fed, and it delights in moisture both in the atmosphere and at the roots, and the more freely it is allowed to ramble the better will be the effect when in flower.—R.

**Gladioli in pots.**—Although not generally grown in pots, Gladioli are most useful for conservatory and general decoration during September. All the varieties of the large-flowering type are good for the purpose, but none surpass in brilliancy the good old *brencleyensis*. One bulb in a 6-inch pot, this being well drained and filled with good yellow loam, a little well-decomposed manure, and a good sprinkling of rough sand or road-grit, is the most useful way of growing them, April being the best month for starting the first batch, a second lot being potted up in May. A cool frame is a good place for them until the new growths are a few inches high, air being admitted freely in fine weather, and the lights entirely removed during the day in May, little water being given till new roots commence to work freely in the soil. In June the plants are best plunged in ashes in a sheltered sunny position, and when growing freely, weak liquid manure given, say, twice weekly will assist in building up strong flower-stems and spikes. When high enough to take harm from winds, neat sticks painted pale green should be inserted in the pots and the stems carefully tied to them, leaving plenty of room for expansion. If desirable, a few plants can be removed from the plunging material to a cool glasshouse, where the flowers will quickly open. I have seen them used to great advantage in artistic groups at exhibitions, the great thing being to use them sparingly. Some might, perhaps, think pot culture unnecessary, supposing that the plants could be lifted from the open ground and potted when required, but, apart from the early date at which they may be had in flower in pots, they never do satisfactorily when lifted and potted up.—J. CRAWFORD.

#### SHORT NOTES.—STOVE & GREENHOUSE.

**The Tubarose in the open air.**—This is so generally seen brought on under glass, that a bed of it in full flower in the open ground at Kew at once attracts attention, owing to its being so seldom met with treated in this way. The plants are flowering profusely. When in the open ground and fully exposed to the sun, the flowers, which under glass are of the purest white, become slightly suffused on the exterior with a reddish tinge.—H. P.

**Nicotiana affinis poisonous.**—Probably many of your readers are not aware that the leaves of this sting the flesh severely. Lately when carrying a few plants in a pot the leaves came into contact with my bare arms, and I felt a sharp, stinging pain. The marks spread out into large patches of red, and now, after six weeks, they are still quite red.—J. G., *Gosport*.

## GARDEN FLORA.

### PLATE 1139.

#### RHODODENDRON KEWENSE VARS.

(WITH A COLOURED PLATE.\*)

AMONG hardy evergreen Rhododendrons there may be noticed two distinct types of inflorescence. In the commoner and hardier group the trusses are composed of numerous closely packed, bell-shaped flowers, arranged in a more or less cone-shaped mass. In the other group the flowers are flatter and more saucer-shaped, fewer in number, but individually larger and arranged loosely. To the latter group belong *R. Thomsoni*, *R. Fortunei*, *R. campylocarpum*, *R. Griffithianum* (*Aucklandi*) and *R. Hookeri* and belonging to the same set also are the hybrids figured in the accompanying plate. *R. kewense* was raised in the temperate house at Kew in 1875 by the late Mr. Binder from a cross between *R. Griffithianum* and *R. Hookei*. Of the numerous plants raised, none flower until the spring of 1888, since which time they have flowered every year, and, as a rule, with great freedom. At first grown in the temperate house, they were afterwards planted outside a peat bed, where they could be protected by canvas covering during hard weather. For the last two years they have at Kew been grown in the Rhododendron dell, with no other protection than a naturally sheltered position such as this affords. Never during the ten years that the hybrids have flowered have they been so beautiful as during last May, when Mr. Moon made his drawing. Most of the bushes some of which are now 8 feet across, were literally covered with trusses of the type here figured, although as a rule much larger. Most of the flowers measured between 4 inches and 5 inches across. Although the whole of the plants came from a single pod of seed, they vary a good deal in the colour of the flowers. Some on first opening are white, with pale rose tinge, becoming almost pure white after a few days; others are of a more decided rose; whilst the richest colour of all is the smaller truss here figured, whose buds are of a rich rosy crimson and the flowers of a deep soft rose, which never loses its warm tint. But all the forms are beautiful and the different hue of the one only serves to bring out more vividly the loveliness of its neighbour.

When its parentage is considered, the hue of *Rhododendron kewense* is remarkable. Little appears to be known of *R. Hookeri*, as I have not heard of its being grown out of doors in the London district. *R. Griffithianum*, which can only be grown here as a cool greenhouse plant, yet there are plants of *R. kewense* (the bulk of them) that have been grown with any artificial protection in the dell at Kew for five or six years, and have withstood, consequently, amongst others, the winter of 1897 without any injury. This hybrid proves that the genus *Rhododendron*, although it has so long been a field where many noted workers have successfully laboured, has not yet had its beauties all revealed. For the hybridiser who has the time and opportunity, and who will leave the beaten track, there are many chances of creating new varieties which shall not only be distinct from those we already possess, but quite as beautiful. W. J. B.

\* Drawn for THE GARDEN in the Royal Gardens, Kew, by H. G. Moon. Lithographed and printed by J. L. Goffart.





## THE WEEK'S WORK.

## KITCHEN GARDEN.

**BEETROOT.**—It often happens that there is more attention over the qualities of this crop between the grower and those who have to prepare it than any other vegetable sent into the kitchen. The usual complaint is that the roots either lack a rich colour, or that they are too large and coarse and tough in texture. These are matters which it behoves the grower to guard against as far as possible, though even when the roots are well grown in every respect, a great deal depends on how they are prepared after they have left his hands. Where the seed was sown too early on rich land the evil of so doing will now be too apparent, as instead of medium-sized spely roots with corresponding foliage, they will have become far too large for general use, and they will increase in size for some weeks to come. Overgrown roots are not only coarse in texture, but they seldom possess that deep rich colour which is appreciated so much when sent to table. Such as this may be regretted, nothing can be done to check growth, as early lifting would result in the roots shrivelling prematurely, and they would become useless. It is not until November in some seasons that growth is checked by frost sufficiently to necessitate lifting and spring. However carefully this may be done, the roots never cook so well afterwards as when lifted direct from the ground. For this reason it is a good plan to leave a portion of the crop undug and protect it with straw litter on the approach of hard frost. It can often be preserved in this way into the new year and later, when by sowing early in frames the season of stored roots is considerably shortened. Beet requires most careful treatment in getting it out of the ground, the least bruise or breakage of roots leading to loss of colour. A fork should be used to assist in drawing the roots out of the ground, and in removing the foliage twist it off, not quite an inch or so away from the crown, or it will prove as harmful as breaking the main root. Of the several ways of keeping Beet as long as possible during the winter, I prefer to stack the roots up in cone-shaped heaps in a cool cellar. They should be arranged so that the crowns all point outwards, and no covering is necessary. As a rule it is the crowns which commence to decay first, and when the roots are drawn together into one large heap rot quickly spreads and many of them are spoilt. By being arranged in the way described a certain amount of leaf growth takes place, and by having sand not too dry—packed between them, small white fibres are formed, which prevent shrivelling, and they last for months in the best condition. Of the several varieties I have grown this season, Dell's Crimson is still the best, being uniform in size and of excellent quality and colour.

**CARROTS.**—What roots may remain from early sowings of the small varieties should now be lifted and stored away for winter use. Instead of turning these up at once I find it better to place them in a bin by themselves, and they invariably keep much better than larger roots which form the main crop, and they come in most useful in spring when Carrots are scarce. I am not in favour of leaving Carrots in the ground until late in autumn, as the heavy rains cause many of them to split, while after a time they lose their colour, and pale rings form in the centre. If they can be lifted before the ground becomes soddened, and when wet the roots come out much cleaner, and even large quantities have to be stored they should be well dried previously. Only the perfect roots should be placed together, as a few bruised or cracked ones soon decay. Imperfect roots should be used up first, as they answer the same purpose as sound ones. It is only where there is another convenience in the way of a suitable pit store that Carrots should be buried in the open, and though they may keep well thus, it is not so convenient to get them if required

during severe weather. A large quantity may be stored in a small compass if made up in heaps as described above for Beet. In this way they can be easily examined at short intervals, and they keep in good condition when carefully placed in sand.

**GLOBE ARTICHOKE.**—I advised raising a batch of plants from seed early last spring, and where this was done a good supply of heads will now be obtained, and the plants will continue to produce them until cut off by frost. It is certainly preferable to have beds well furnished with young, vigorous plants than to see the plantation, as one often does, irregular and patchy, owing to the plants being killed by frost or too much wet. This year's plants will be protected with long litter as the season advances, which will give a supply earlier next season, and by raising another batch in February a long succession is maintained. A few dishes of these for the next few weeks prove very acceptable, as they make a variety when Scarlet Runners are cut off.

Goodwood.

RICHARD PARKER.

## FRUIT UNDER GLASS.

**FIGS.**—The season for these is fast drawing to a close, and never do I remember Figs having been more plentiful and in finer condition than they have been this year. Some March-started trees are still carrying a good second crop, but these will be over in a week or ten days; and with this exception, all trees are now bare of fruit and taking a well-earned rest. All late-fruited trees should get plenty of air as soon as the crops are cleared. Much less moisture will also be required at the roots, and this, with a free circulation of air, combined with the ripening influence of autumn sunshine, should lead to the wood becoming thoroughly consolidated and in the best possible condition for fruiting next season. If any of these trees have been allowed to develop fruits within the past six weeks, they should be pulled off at once, as there is not the remotest chance of their attaining maturity this year, while to allow them to remain will only distress the trees. Such work as root-pruning, and curtailing the root-run of unfruitful trees should be pushed on with while the dry weather allows of carting and wheeling being done. Although Figs are now grown much more extensively than was formerly the case, it is astonishing the number of inquiries that are made as to their culture, more particularly with regard to borders. There seems to be an impression with many people that extensive borders are necessary, and that the soil must be rich, whereas the opposite is the case. Figs fruit best when their roots are restricted, and when planted in loam, to which lime rubble or some such calcareous matter has been freely added. (Growth made under such conditions is always firm, of medium strength, and an embryo fruit will be found at the base of each leaf on every shoot by the time autumn arrives. The roots may be confined by brick walls, but if they are below ground the joints should be pointed with cement to prevent the roots escaping. Even when this precaution is taken, it is always wise to throw out the surrounding soil every autumn, in case any roots should have made their way through a faulty joint. The plan I favour most is to build a pit of brickwork from 3 feet to 4 feet long, 3 feet wide and the same in depth, on the ground level, using as a base paving stones, which are laid in cement so that the roots cannot penetrate through the joints. Six inches of drainage are placed in the bottom of the bins, and the water escapes through small apertures between the bricks in the lowermost course. Trees planted in these pits or bins will cover a large area of trellising and carry heavy crops of fruit annually. Feeding is done from the surface, and the mulching and a certain amount of the surface soil are removed every autumn to allow of a top dressing being applied. Another method is to grow them in square beds of soil enclosed with turf walls, built upon brick floors or paving stones: but of the two I prefer the brick pit, and give the above details for what

they may be worth. In the early house the permanently planted trees will have shed their leaves. Whatever pruning is necessary can therefore be done at once, and then the necessary steps for cleaning the trees and the house, should insects have gained a footing, can be undertaken during wet weather or when a suitable opportunity offers. Early pot trees, if they were moved outdoors a few weeks ago to undergo a thorough rest, should be taken under cover again. Before doing so the house they are to occupy had better be cleansed, and the trees taken to a shed to undergo a thorough cleaning, if needed, before taking them indoors. Scale is the principal insect pest which attacks Figs, and no pains should be spared to rid the trees of it. After cleansing both house and trees and putting all in order, keep the house perfectly cool until the time arrives for starting, either in November or December.

**CHERRIES.**—Pot trees outdoors will be shedding their leaves if they have not already done so. They should now be looked over, when if any pruning should be found necessary get it done at once, in order that the wounds may heal up before there is a likelihood of a severe frost occurring. Strictly speaking, pruning should be unnecessary if due regard was paid to the stopping with the finger and thumb of all young shoots during the growing season. A free use of the knife on Cherry trees, either in the autumn or winter months, leads to gumming, and should therefore be avoided. After this general look-over, get all necessary potting and top-dressing done, if these have not already had attention, after which stand the trees in one block, with a sufficient space between each to allow of Bracken or such like material being packed between the pots or tubs in a few weeks' time, as a protection against frost. Planted-out trees will be going to rest, but additions to borders, lifting, transplanting and top-dressing should be completed as early as circumstances will allow. Borders in newly-erected houses should be made, and the planting done forthwith, if trees have been grown at home for one season with that end in view. If the trees have to be purchased, a delay of a few weeks will occur in the planting, but this need not prevent having everything in readiness for their reception.

**PLUMS.**—As soon as the fruits are gathered from the late varieties, such as Golden Drop and Jefferson's, look to the trees, potting or top-dressing them as may be necessary. Then turn them outdoors, and if the foliage has become infested with insects take steps to eradicate them before placing the trees with the others turned out a few weeks ago. This moving of the trees outdoors will leave the houses at liberty for the housing of Chrysanthemums where large numbers of these are grown, an arrangement which generally works well, while the Plums will be all the better for a few months sojourn in the outer air. These, like the Cherries, should be so arranged that some non-conducting material can be placed between the pots later on.

**PEARS.**—As the fruits are gathered from these take them to the potting shed and treat them as advised for Plums, after which place them outdoors in the full sun, on a hard foundation, so that worms cannot gain an entrance through the crock holes. As winter approaches these must be protected in the same way as advised for Cherries and Plums. Trees on which the fruits are ripening must be carefully watered, as too much moisture will lead to the flavour being flat and insipid, while the contrary treatment will cause the fruit to drop prematurely. A happy medium must, therefore, be hit on which will keep the roots supplied with just a sufficient amount of moisture to enable the trees to perfect their fruits. Continue to feed trees of later varieties until the fruits are full grown or on the point of ripening, and then give pure water only, observing the foregoing conditions.

**ARTICHOKE HOUSE.**—This house cannot possibly be kept too cool; therefore ventilators and doors should be opened to their fullest extent. This free volume of air continually passing through the house and circulating among the trees, together

with the sunshine we may reasonably expect for another four weeks, will assist the trees to plump up their buds and lead to the thorough ripening of the wood, without which it is useless to look for good crops of fruit. Although the trees must have free exposure as far as possible, the roots, or rather the borders, must not in any way be neglected, and they must be kept in a properly moist condition right through the winter months. Inattention to this matter will lead to the buds dropping in a wholesale manner next spring, and this is more often than not the stumbling block in Apricot culture under glass. A. W.

## FRUIT AND VEGETABLE CROPS.

### SCOTLAND.

**Caprington Castle, Kilmarnock.**—All the fruit trees in the early spring looked promising, but owing to the cold cutting winds and frost in May, wall trees especially were badly crippled. Peaches with four ply of netting on them are all but a failure, the first miss I have had for a number of years. Plums, with the exception of Victoria and Magnum Bonum, are all blank. Pears shared the same fate with the exception of Marie Louise, Duchesse d'Angoulême, Winter Nelis and Hessel, which are all heavily cropped. Standard Apples were late in flowering and escaped the cold winds. Some are laden to the ground, especially Keswick Codlin, Stirling Castle, and Irish Codlin. Hawthorn den has splendid crops, and there is a fair sprinkling on the others. Raspberries are an abundant crop. White, Black, and Red Currants are very heavy, also Gooseberries. Cherries light.

Vegetables, though late in the early part of the year, made rapid progress when good weather set in. Midseason Peas are very poor owing to the drought we had some time ago. Early Peas were a splendid crop, and the late ones are looking well. Potatoes are fine crops and clean, but the disease has started amongst them.—WALTER YOUNG.

**Gattonside House, Melrose.**—The Apples and Plums here are much below the average. Pears and Cherries average. Apricots none. Gooseberries are above average in quantity and of splendid quality. Currants average; Black Currants in some places poor crop. Strawberries splendid crop and of good quality. Raspberries above the average.

Vegetables are above average. Peas have done well. Cauliflower has been very good with me, but I hear complaints from different parts as to its doing badly. Potatoes are very good, both in quantity and quality; Sutton's Satisfaction is the best second early that I have tried.—ROBERT WEDDELL.

**Hopetoun Gardens, Queensferry, N.B.**—The autumn of 1896 being cold and wet, as a rule fruit trees in this locality did not ripen their wood very satisfactorily. Nevertheless, an abundance of flower-buds was formed. They, however, looked small and not so plump as in former years, consequently when the flowering season came round the flowers were weak, and the cold, raw, wet snap we experienced during that period checked the natural flow of sap; this, coupled with occasional gales of east wind (prevalent here) and an absence of sunshine, I have no doubt caused the damage. The only varieties with anything like a crop are the various Codlins. The bright warm genial sunshine of the past month has improved the trees, and I have no doubt the fruit will swell to a nice size, the trees being in good health and now free from insect pests. The Pear crop on walls is certainly better than the Apple one, but the same may be said of Pears as of the Apples—weak buds and weak flowers, the result being about half a crop, and with the lateness of the season they may not swell to size as in former years. Apricots not plentiful, but good. Sweet Cherries are barely an average crop, and the

Morello Cherries are not so good. I do not grow many Peaches on the open walls, but those I have are good. Plums all but a failure, both on walls and standards. Gooseberries are plentiful, but small. Currants abundant. Strawberries very good and abundant.

Vegetables are strong and vigorous, and I have no doubt the supply will be quite equal to the demand.—J. SMITH.

**Culzean Castle, Maybole.**—The fruit crop in this neighbourhood has been very poor. Gooseberries, Pears, Plums, and sweet Cherries, also Black Currants in some gardens, have been quite a failure. Apples in some gardens are very good, but late; I have a heavy crop in the gardens here. Morello Cherries are also good.

All the early vegetables were very poor, especially Cauliflower and French Beans; the later crops are looking more promising. Onions are very bad with maggot.—DAVID MURRAY.

**The Gardens, Orchardton, Castle Douglas, N.B.**—Although we had abundance of bloom, Apricots, Pears, Plums, Cherries, and Damsons are almost a failure. Cherries fell wholesale at the stoning period, late spring frosts being the cause. Apples are rather under average. All small fruits are a good average crop. Raspberries, Red and Black Currants extra good both in quantity and quality.

All vegetable crops have done well. Peas are extra good, although mildew has been troublesome. I am growing Autoerat this year for the first time. It appears to be a good mildew-resister and a good all-round Pea. Early and second early Potatoes did very well indeed, no disease, but later kinds are showing disease badly.—P. WILSON.

**Carron Lodge, Stirling.**—Fruit crops which are most abundant in this locality are Apples and all small fruits. Of Apples, all the Codlin class, especially Lord Suffield, Keswick Codlin, Lord Grosvenor, Potts' Seedling, and Golden Spire are the best. Stirling Castle, Cellini, Northern Greening, Yorkshire Greening, Seaton House, Sandringham, Wellington, King of Pippins, Worcestershire Pearmain, Irish Peach, Red Astrachan, Golden Pippin, and Kerry Pippin are loaded with fruit and have had the crops thinned. The trees are mostly young and kept dwarf. They are resting on a bed of broken bricks and lime rubbish, the roots kept on a level with the surrounding soil. The situation being low and damp, it is necessary to keep the roots well up to receive the benefit of the sun.

Vegetable crops never were started under greater climatic difficulty, and made slow progress till July; then they grew rapidly, and are now, without exception, all one could wish. Potatoes have been good, but disease has been in evidence. Earliest sorts were very good. Sharpe's Victor (the yellow variety) was first and best. Snowdrop is a favourite. Its small haulm allows sun and air to reach the soil freely, which is much in its favour on our damp soil. Onions are late, but of capital quality. The most useful Peas have been Chelsea Gem, Dr. McLean, Telephone, Veitch's Perfection, Autoerat, and Ne Plus Ultra as latest.—M. TEMPLE.

**Galloway House, Garlieston.**—The fruit crops in this county are considerably below the average of the last few years, but with the exception of Pears, which are very poor both against walls and in the open, there is not very much to complain of, for what is lacking in quantity promises to be recompensed to a great extent in the size and quality of the fruit. This applies especially to Apples, which are very clean, large and well shaped. Of these, the Codlins and other early sorts are bearing full crops, while later sorts, as Eeklinville, Warner's King, Lane's Prince Albert, Loddington and a few others, are very satisfactory. Plums are below average, the best being Rivers' Prolific, Czar, Kirke's, Victoria, Lawson's Golden Gage and Pond's Seedling, which are growing against walls with various aspects. Standard trees are very thinly cropped, and Damsons are a complete failure. Figs are heavily

cropped. The sorts grown are Castle Kenned and Brown Turkey. The former has ripened quantity of very fine fruit, but owing to the lateness of the season, it depends upon the weather during the next few weeks as to the success of the latter. Peaches and Nectarines are a light crop and the fruit much smaller than usual. Apricots were a light crop, but of very good quality. Cherries of dessert sorts were fair good, but Morellos both in quantity and quality are much below the average. Strawberries were very good, and the dry weather that prevailed when the fruit was ripening enabled the crop to be secured in excellent condition. Gooseberries, Currants and Raspberries were good crops and the fruit very fine. Pears, with the exception of Jargonelle, Beurré Rance, Williams' Bon Chrétien, Beurré d'Amanlis and Ne Plus Meuris which are against walls, are almost a failure.—JAMES DAY.

### IRELAND.

**Charleville Forest, Tullamore.**—I have never known the hardy fruit crops here so poor. The long, severe spring, which lasted almost to the end of May, was simply ruinous to them. Apricots, Morello Cherries, Damsons, and I might almost add Plums, are a failure. Sweet Cherries a few. Apples and Pears about a quarter crop. Strawberries good. Currants and Raspberries fair.

The Potato crop has got a very early touch of blight, which will give late sorts not much chance for a return. The leaves are almost all cut. Champion, just at the season when the tubers ought to be swelling. The half of early kidney and second varieties is now rotten. Peas were never better. The same applies to all other vegetables except Onions, which would have been benefited by more sunshine.—ROBT. McKENNA.

**Castle Upton, Templepatrick.**—The fruit crops here are much under average, with the exception of Raspberries, which were very heavy and fine. Strawberries are very poor. Other bush fruit is a fair average. A few Apples, such as Warner's King, Keswick Codlin, Small's Admirable, Irish Peach, Duchess of Oldenburg and Ribston Pippin, are a fair crop; others poor. Pears, Plums and Cherries are poor.

Midseason Peas have been good. Early Potatoes clean, but small.—E. TAPPING.

**Stradbally Hall, Queen's Co.**—After the wet, sunless weather we experienced here last autumn, fruit trees, especially Pears and Plum made a good show of bloom. Consequently, we anticipated a grand fruit year, but the May frosts blighted the bloom. This garden being low and late escaped better than most in the district, some of which have scarcely an Apple, Pear, or Plum on the trees. Here we have very few Pears or Plums, but a very fair crop of Apples. Of dessert sorts, Devonshire Quarrenden and King of the Pippins are fairly cropped. Of kitchen sorts, Tower of Glamis, Fillbasket, Cat's-head, Warner King, and a local sort named The George are the most plentiful. The last-named Apple is by far the heaviest cropper we have this season. It is a beautiful fruit and a good cooker. Of small fruits, Red Currants were good; Black poor. Gooseberries medium. Raspberries showed plentifully, but many of the fruits failed to swell. Strawberries, Noble and Vicomtesse H. de Thury were heavily cropped and good; Sir Joseph Paxton and Latest of All were poor in crop, but of good quality.

Vegetables, although late, are quite up to the average in quality; Onions are especially good with me, but I sowed the main crop on a hot-bed in February, and planted out between young Strawberries in April. On our cold, wet soil we have never been able to get really good Onion by the ordinary system of sowing, and would strongly advise anyone in a similar position to try the frame system. There is no loss of time as there is no after-thinning to do.—J. TWENDALE.

**Headfort Gardens, Kells, Co. Meath.**—We had a fine show of bloom, but owing to the wet and cold season we have very little fruit

ples are under average; Pears the same; bush fruits scarce. Strawberries promised well, but the fall here for the month of June was 6.56 in., the result being that all the best fruit rotted. The kinds I favour are Royal Sovereign, Noble, Hogg, and Latest of All. I grow others, but the above-mentioned do best with us.—JAS. BUNSLAW.

**Castle Macgarrett, Claremorris.**—The fruit crops in the gardens here are much below the average. Apples and Pears very light. Plums and Cherries on walls fair. Filberts good. Small fruits were plentiful. Gooseberries and Currants all kinds very good; also Strawberries.

Vegetables of all kinds satisfactory. The following Peas have done well this season: Telegraph, Fillbasket, Alpha, Prizetaker, and Champion (England). We have beautiful green Peas now (October). Telegraph is a splendid Pea and does well here. Potatoes not so heavy as last season; quality poor. Potatoes planted early in March much better than late-planted ones; the latter diseased before they are fully grown and marketed.—J. QUAA.

**Straffan House, Straffan Station, Co. Kildare.**—The fruit crops in this neighbourhood are much under average, brought about by the severe frosts of March 30 (14°) and April 2 (11°), each of 10 hours' duration. Peaches, Apricots and Plums all failures, and the Peach trees nearly all killed outright. Of Apples, we have good crops of Lord Suffield, Blenheim, Northern Greening, Fearn's Pippin, Loddington, Cellini, Bess Pool and Bramley's Seedling, and in each case these kinds bore very heavy crops in 1895 and 1896. Pears are early an average crop. Marie Louise, Winter Nelis, Passe Colmar, Knight's Monarch, Ne Plus Ceris, Beurré Rance and Alexandre Lambre have all good crops. Strawberries were an extra heavy crop, Royal Sovereign, Vicomtesse Hélicart de Lury, Waterloo and President being the best. Gooseberries, Raspberries and Currants of all kinds were excellent, but much damaged by wet. Vegetables, on the whole, have not been a success. Runner Beans good and Veitch's Criterion was extra good, but other kinds poor as regards produce.—FREDERICK BEDFORD.

**Fota, Cork.**—Fruit crops in the south of Ireland are much below the average. February was warm and dry month, which unduly excited the sap of fruit trees. In March and April there were heavy gales of wind and rain. The Plum blossom opened first, only to be cut off by the wind as fast as every bud expanded. Pears followed, and were treated the same; Cherries also. The mean temperature of the three months was the same, except that of February, which was about half degree warmer than the two following months. Small fruits were very partial; in one garden, as here, Gooseberries were a full crop, in others in the neighbourhood none; other small fruits under average; Strawberry season short. Apples are an average crop and fruit clean, but not so well coloured as last year. The following are bearing heavy crops: King of Pippins, Blenheim range, Cox's Orange Pippin, Worcester Pearmain, Kerry Pippin, Ashmead's Kernel, Queen of Glamis, Lord Grosvenor, Lane's Prince Albert, Small's Admirable, Sandringham, Stone's Farmer's King, Tom Putt, Winter Hawthornden, Lady Henniker, Gascoigne's Seedling, Alfriston, Golden Noble, and Bramley's Seedling, a constant and heavy bearer. I mention this because any may be deterred from planting it, in consequence of the few unfavourable reports we read from time to time as to its bad growth and shy bearing; here it commences to bear after two years. It is a splendid grower, and bears heavy crops of fine clean fruit every year. The old favourite, Wellington or Dumelow's Seedling, is less here, so the heads have been cut off and affected with Bramley's, branches of this being now bent to the ground by the weight of fruit. I mention this to show that there cannot be any fixed and fast line drawn as to the best varieties of fruit for every garden; other fruits are influenced in like manner by soil and locality. Pears are scarce, and these cracked and malformed; Peaches

a very heavy crop under glass copings and well coloured, but lacking sugar in consequence of the sunless August. Figs and Mulberries are fine crops, but destroyed by birds and wasps.—W. OSBORNE.

#### SUPPLEMENTARY.

**Addington, Winslow.**—The fruit crop is disappointing. Apples may be said to be a complete failure, the very heavy crop carried last year may partly account for this. Pears are also a thin crop with the exception of Fon Chrétien, Marie Louise d'Uccle, and Crassane. Plum trees showed a great deal of blossom, but during the time they were in flower we had a long spell of dry, east wind, which did much damage. Some young espaliers are, however, bearing a fine crop, particularly one named The Czar, also Prince Englebert and Monarch. Small fruits of all sorts are abundant and good.

Vegetables of almost all kinds have done well this year, the exception being the Pea crop, which was soon over. All the Brassicas are now looking strong and healthy, so the prospect for autumn and winter is good. Of early Potatoes I find Sharp's Victor a really good kind, both for produce and quality, and it has been perfectly free from disease. Among later kinds I have a suspicion that disease exists, but I have not proved it yet. I may say a word in favour of Veitch's Climbing Bean, it is most productive and of excellent quality.—A. MATHIESON.

**Ashwellthorpe Hall, Norfolk.**—Fruit crops in this garden are far below the average, Apples being a total failure. Pears are a very poor crop. Plums are very thin on the walls and on the standard trees. Damsons are almost a failure. Apricots are the best crop we have. Peaches and Nectarines on unprotected walls are a fair crop. Gooseberries, Currants, and Raspberries were a very thin crop. In this neighbourhood Raspberries are grown largely for market, and the crop was only about a third of what it usually is.

Vegetables of all kinds have done fairly well, Peas better than usual. The Potato crops are very good indeed, and Onions in this garden have never been better.—T. B. FIELD.

**Osterley Park, Isleworth.**—The fruit crop is much below the average. Apples are very scarce with the exception of the early and soft varieties, such as Keswick and Lord Suffield, which have carried fair crops. Pears and Plums are a failure. Bush fruits are much below the average, while Peaches on the open walls are carrying heavy crops. I gathered the first dish of Hale's Early on July 20, ten days later than last year. The trees suffered badly from blister early in the year, owing to cold winds and late frosts. Strawberries have been excellent with me this season. Walnuts are a failure and Cob Nuts a good crop.

Early Potatoes have been a good crop and free from disease, but I find it spreading in the later crops. Peas did well in the early part of the season, but after the heat and drought they were badly attacked with mildew and thrips. Such sorts as Daisy, May Queen, Veitch's Perfection, and Antocrat bore the best crops. Beans have done well. Root crops look remarkably well since the recent heavy rains.—JAS. HAWKES.

**Tedworth, Marlborough.**—Fruit crops in this neighbourhood are very disappointing, especially stone fruits. Plums and Apricots are almost a failure. Cherries a light crop. Apples partial, early varieties being much better than late ones. Lord Grosvenor, Lord Suffield, Cox's Pomona, King of Pippins, Yellow Ingestre, Worcester Pearmain, Beauty of Bath, Irish Peach, Stirling Castle, Ecklinville Seedling and Lane's Prince Albert are carrying good crops. Some later varieties are carrying half crops, although all blossomed well. We certainly had some late frosts, but I think the cold winds did the mischief. Pears in some places are satisfactory, but in others light. Our best varieties are Clapp's

Favourite, Seckle, Thompson's, Brown Beurré, Beurré Rance, Glou Morcean and Josephine de Malines, with a fair crop of Doyenné du Comice. Peaches and Nectarines inside have been very good, but are very unsatisfactory on outside walls, suffering more than usual from blister. Strawberries have been very satisfactory, both forced and in the open. Raspberries were also a good crop, but suffered somewhat from drought. Superlative is a fine fruit. Black Currants were a heavy crop of fine fruit, Red and White Currants very scarce. Gooseberries were also a good crop and troubled little with caterpillar. Nuts of all kinds are plentiful; in fact, I never recollect such a heavy crop of Hazel Nuts.

Vegetable crops are good. There are heavy crops of Potatoes and very little disease at present. Peas have done better in than the past two seasons. Sutton's Climbing French Bean Epicure is very good, being a heavy cropper and the flesh delicate.—G. INGLEFIELD.

**Tring Park, Tring.**—Fruit crops here and in the neighbourhood are generally unsatisfactory. Apples are very light, having borne heavy crops for two years previously. There are a few kinds I might mention carrying fair crops; these are Ecklinville, Duchess of Oldenburg, Lady Sudeley, Lane's Prince Albert, Winter Hawthornden, King of Pippins, Dumelow's Seedling, Hanwell Souring, and Court Pendu Plat. Pears are a good crop and above average, quality very good. Plums on standards and bush trees are quite a failure. Some kinds on walls are carrying fair crops. Cherries quite a failure, including Morellos. Bush fruits have been very good. Strawberries, Nuts, and Filberts are carrying very heavy crops.

Vegetable crops have required much watering, the season being a very dry one. Mid-season Peas were badly affected with mildew. Early Potatoes are small in consequence of the drought, and late ones were a long time coming through the ground from some cause. As yet I have not found any disease.—EDWIN HILL.

**Ottershaw Park, Chertsey.**—Pears on walls have a fair crop, and a few sorts in the open have a few fruits. The following Apples are bearing the most fruit: Grenadier, Lady Henniker, Keswick Codlin, Lane's Prince Albert, Lord Suffield, Annie Elizabeth, Red Juneating, Stirling Castle, Gloria Mundi and Fletcher's Prolific. Apples, Pears, Plums and Cherries are poor. Peaches and Nectarines average and good.

Early vegetables have been very good, but late ones have suffered in places from want of water. Early Potatoes were very good. The second earlies are yielding good sound tubers and the late ones are looking very well.—T. OSMAN.

**Crowsley Park, Henley-on-Thames.**—The fruit crop in this neighbourhood is very poor indeed. Apples here are very indifferent. On many of the trees there is no fruit whatever, while just a few are carrying a small quantity. In most of the orchards round here Apples are a complete failure. Peaches and Nectarines are excellent. The fruit required a good deal of thinning out. The trees are healthy and clean, although they were much injured by blister in the early part of the season. Pears thin. Plums and dessert Cherries almost a failure; Morellos thin. Currants, Gooseberries and Raspberries a fair crop. Strawberries good. Filberts and the common Hazel Nuts very abundant; Walnuts poor.

The vegetable crop was very satisfactory in the early part of the season, but a great falling off took place after the drought had well set in.—W. GLASSEY.

**Ripley Castle.**—There was a splendid show of blossom on all fruit trees, but a long spell of cold north-easterly winds followed by severe drought has materially altered the promise of spring. Apples are erratic, some trees carrying good crops, others very thin indeed. Of kitchen sorts, the best cropped are Lord Suffield, Ecklinville Seedling, Alfriston, Norfolk Dumping, Councilor, Annie Elizabeth, Mère de Ménage, Nelson and Keswick Codlins; of dessert kinds, Irish Peach, Early Harvest, King of the Pippins

and Devonshire Quarrenden are bearing most freely. Pears also are erratic; those bearing most freely are Citron des Carmes, Jargonelle, Louise Bonne of Jersey, Pitmaston, Glon Morceau, Althorp Crassane and Moorfowl's Egg. More rain is badly needed in this district, otherwise Apples and Pears will not attain much size. Plums are a failure throughout. Apricots are very thin and many branches are dying off. Cherries, both sweet and Morello, are thin crops and gumming is more prevalent than usual. Strawberries were a heavy crop, but suffered through drought. Gooseberries, Red and Black

ful and over average. Strawberries promised well before the disastrous frost in the early part of May, which blackened all the first and strongest flowers, which alone can be reckoned on to produce a heavy crop. The later flowers, though they came on and did fairly well, the season being in every way favourable for their development, did not yield more than an under average crop. Apples are generally scarce; here and there a fair sprinkling may be seen on some trees, our best being Duchess of Oldenburg and Blenheim. Irish Peach and Lord Suffield are fairly good. Plums are a light crop, Victoria and

## FERNS.

### FILMY FERNS.

(TODEAS.)

FILMY FERNS form two distinct groups, one having large and bold coriaceous fronds, the other having fronds thin and pellucid in texture. *T. africana* is the plant upon which the genus was established. It was introduced into this country from the Cape of Good Hope about the year 1805. The well-known Australian ex



*Todea pellucida.* From a photograph by Miss Willmott, Warley Place, Essex.

Currants are heavy crops. Raspberries average, but soon over. Filberts good.

The vegetable crops have suffered from the dry summer. Early and midseason Cauliflowers were very unsatisfactory. Peas are bearing good crops of excellent quality, but each sowing quickly failed. Brussels Sprouts, Broccoli and other winter greens look well. Root crops are good. Potatoes are good and perfectly free from disease.—J. TUNNINGTON.

**Clarendon Park.**—The whole of the fruit crops here in South Wilts must be regarded as under average except Nuts, which are very plenti-

Rivers' Early Prolific being the best bearers. Apricots were thin, as also Cherries, except May Duke, which bore a light crop. Currants and Gooseberries were about an average with me, but in some gardens near Gooseberries fell from the trees after the frosts in May. Nuts over average.

Vegetables of all kinds have done well, early and mid-season Peas especially so, but late sorts were checked by the dry weather. Potatoes are good and promise well almost everywhere here about, and up to middle of August but little disease was to be seen.—C. WARDEN.

plorer, Allan Cunningham, sent home from that country a similar plant under the name of *T. australasica*, also known as *T. rivularis*, but the Australian and African plants are now considered to be identical. Notwithstanding this decision, however, under cultivation the African plant does not attain to anything near the proportions that the Australian plant assumes, nor is it such a vigorous grower; its fronds are more triangular in outline, and the plant altogether is more spreading in habit. The Australian plant produces fronds from 3 feet to 6 feet

length, or more. In damp ravines in Victoria it attains gigantic proportions, masses of it measuring some 6 feet in height, more than 12 inches in diameter, and over a ton in weight.

(LEPTOPTERIS) HYMENOPHYLLOIDES, also known by the name of pellucida (see cut), produces fronds triangular in outline from 12 inches to 18 inches long, and from 6 inches to 9 inches wide in the broadest part; they are, however, frequently of smaller dimensions; the fronds, which are twice divided, have elegantly-cut segments, whilst the texture of the pinnae is thin and membranous, and the colour deep green. It comes from mountain ranges in New Zealand.

SUPERBA is also a New Zealand plant, popularly known as the Ostrich-feather Fern, from the resemblance of its fronds to the curled plumes of the bird. In outline it is vasiform; the fronds are some 18 inches to 24 inches in length, tapering at each end. The point of the segments curls upwards, giving the fronds a peculiarly beautiful crepe appearance; they are bright green when young, but become dark green when old.

INTERMEDIA is a magnificent Fern, partaking in some of the characters of both the two previously named kinds, but it does not possess the vase-like form of *superba*, although its fronds are somewhat recurved.

FRASERI resembles the last in general outline; its pinnae are alternate, the segments more distant, and the lip finely divided. It comes from New South Wales.

WILKESIANA is a very beautiful plant. It usually grows from 3 feet to 5 feet in height; the stem is very slender, not larger than an ordinary walking-cane, but occasionally stouter. The fronds are some 2 feet in length.

Plants are not difficult to cultivate; they thrive in moist spots in a tropical fernery, and are equally at home in a cool house; we have seen them growing vigorously in an unheated conservatory with the protection of a mat in sharp, frosty weather; whilst as ornaments in a Wardian case in well-lighted-rooms the filmy-fronded kinds are unequalled. Wherever grown, however, the sun's rays should never reach them, but do not shade them with green glass, or the beauty of the elegant fronds will be destroyed. These plants enjoy moist air; their fronds like to be frequently bedewed with the syringe, whilst the roots must be kept wet, but water must never stand about them. The soil should be good, peaty peat, a little loam, and some sharp river sand.

#### GYMNOGRAMMA SCHIZOPHYLLA.

This is one of the most beautiful Ferns in cultivation, and very pretty in a young state. In a warm house it is of the easiest culture and thrives either in pots or baskets, its habit fitting it well for the latter. It should, if possible, be suspended where the fronds cannot be touched or broken, as when grown on a stage with other plants they are apt to be. The fronds on well-grown specimens grow from 18 inches to 2 feet in length, and the pinnae are deeply cut, the dark, wiry stems showing plainly through them. It is a good practice to syringe this Fern much overhead; a light dewing may do no harm on hot drying days. If required for table decoration it may easily be kept in small pots; in fact, it is much safer under than over-potted in any case, but when a plant becomes very much potted it is wise to give the roots a chance to get free from the old ball before repotting. This may be done by turning it out of its pot and laying it for a time in a little loose Fern compost. The young rootlets soon begin to run out into this, and the plant may safely be potted, with a little of the new material clinging to the roots. If placed in a fresh pot without this precaution the old ball often gets dried up, while the soil around it is moist, the consequence

being that the roots perish before they have a chance to get out. Very pretty baskets may be made by placing a strong plant in the centre, and, as the young crowns appear on the tips of the fronds, pegging these down to the sides of the basket. In about three years they will be at their best, and another set should be planted to take their place when they become too thick, for the beauty of this Fern lies in its lightness and airy character, and this is to some extent lost in a thick mass of fronds.

The best way to propagate *G. schizophylla* is by means of the young crowns referred to, these being laid on small pots of compost near the parent plant until rooted. They come away with more freedom than divided portions of an old plant, as these cannot be separated without losing many of the best roots. If only the latter are at command, place them in as small pots as possible in a moist house, so that they may be kept fresh without very much root moisture. Once let the roots get hold of the soil they are all right, but the latter soon becomes sour and unsuitable for them when the moisture is not taken up. This fine species is a native of Jamaica and was introduced in 1880. There is a garden form called *gloriosa* which is stronger in growth, but the type is as often as not sold for it. R.

#### THE HARDY FERNERY.

Now that autumn has come, with its fine days and cool nights, the best time of the year has arrived for the formation of new ferneries outdoors or the re-arrangement of old ones. This, therefore, is an appropriate time to bring forward the

##### MODE OF PLANTING.

The planting of Ferns is often done without any system, in a sort of haphazard style, and thus the effect is considerably minimised. While system however is necessary for the production of the best results and effects, it must not be supposed that a symmetrical and artificial style is advocated. One thing which is perhaps more noticeable than any other in the natural habitats of the Fern family is the manner in which they grow. As a rule, where Ferns are abundant they are found growing in masses or clumps of each individual kind, and although stragglers are found outside of these clumps, they are as it were colonisers, which have by some means become isolated, but which will proceed to gather around them a progeny by offshoots or spores, which will in course of time form equally effective masses as those existing in their immediate neighbourhood. For instance, on the mountain sides are seen square yards covered with nothing but the Parsley Fern (*Allosorus crispus*); in other places dense masses of the Lady Fern (*Athyrium filix-femina*); elsewhere even larger masses of the Male Fern (*Lastrea filix-mas*). In some places the mountain Buckler Fern (*Lastrea montana*) abounds, forming long, irregular masses; and the same remarks may be made in reference to most of the British species. When these things are considered they serve to guide Fern cultivators in the style they should adopt in the planting of Ferns in their gardens, whether in rockwork or otherwise. Far too frequently Ferns are dotted about and intermingled one with another, so that there is nothing definite in the effect, all individuality of species being lost. To prevent this, and at the same time to come as near as possible to Nature's ways, Ferns should be planted in clumps, say half a dozen or so of a kind together. By this means each kind will be kept distinct, and an effect produced at once pleasing and natural. By a judicious arrangement of the different genera and species or varieties, the peculiarities of each may be made

prominent, the clumps of the heavier-foliaged kinds serving to show up those of the lighter and more graceful kinds. The colour also, or the shades of green, should be considered, and thus another feature of interest utilised in the arrangement to produce improved effect.

##### TIME FOR PLANTING.

Autumn is the best time of the year for the planting of Ferns out of doors, as, their season's growth having been made, they will bear removal then better than when in growing condition, and there is little risk of injury provided reasonable care is exercised. When replanted in September or October the plants have an opportunity to make roots and become established by the spring. They may, indeed, be safely removed any time before growth commences, but the longer the interval between their removal and their commencing to grow, the better it will be for them. All Ferns should be removed and replanted with as many roots as possible; if the whole of the living fibrous roots they have made are left intact there is far more certainty of their making vigorous and satisfactory growth the following season than if a number of these feeders are broken off and the plants deprived of their assistance. At this season also division of the crowns and rhizomes may be most safely accomplished, and thus an increased number of plants be secured for extension of the fernery.

Many people have a clearing up when the leaves have fallen from the trees and the Fern foliage becomes brown, but in the interest of the Ferns this should be postponed until spring. The fronds of the Ferns and the fallen leaves when left on and about the plants serve materially to protect the crowns and slender creeping rhizomes of such as the Oak Fern, the Beech Fern, and similar kinds from the frosts and cold winds. They also serve to retain moisture about the plants, which is very beneficial during even the dormant season. In spring, when the new fronds begin to start and growth is on the point of becoming vigorous, it is advisable to remove the old fronds, as they are not then of much further use to the plants, and they can be dispensed with and the fernery cleared up ready for the new season.

An important matter in the making of a new or in the reconstruction of an old fernery is the supply of proper compost for the Ferns to grow in. When possible some good fibrous turfy loam should be procured, and after the removal of any growing material, the fibrous portion should be chopped up so as to form a nice rough mass. To this should be added an equal proportion of good partially decayed leaf-mould, another equal quantity of good fibrous peat, and about an equal proportion of sharp sand. These mixed together will form a compost in which almost any Fern will grow luxuriantly. Of course, some of the kinds require a little variation. For instance, the Polypodies will be better with a double quantity of leaf-mould, the *Osmundas* a double quantity of peat, the *Scelopendriums* will also be benefited by a free admixture of lime in the form of old mortar, broken oyster shells, or tufa dust. *Blechnums*, however, cannot do with lime at all, hence it is a good plan to mix up the general compost first, and then, taking this as the foundation, provide the various kinds with anything special which they may require. There are many very beautiful varieties among the hardy Ferns which, unfortunately, are far from being as well known and as extensively cultivated as they deserve. Some of the North American species are exceedingly hardy and their style of foliage quite distinct from anything among British Ferns, while, on the other hand, some of the varieties of our native Lady Fern, Poly-

body and Shield Fern are exquisite in their finely divided fronds and delicate shades of green. B.

## ORCHARD AND FRUIT GARDEN.

### APPLE LORD DERBY.

THIS variety is well known and worth a prominent position in the garden. I well remember at the National Apple Conference at the Royal Horticultural Society's Gardens at Chiswick in 1883 this variety was shown in no less than forty-three collections from all parts of the country, and a dish from Messrs. Lane and Sons, Berkhamsted, was specially fine. Mr. Barron describes it as a large, oblong, angular, greenish-yellow, mid-season fruit of first quality for cooking, a fine handsome Apple and a great bearer. These, remarks everyone will admit, are very appropriate. It appears to have had no synonyms at the congress noted above, and this is strange, as many of our most popular Apples have numerous synonyms. The congress alluded to is now bearing excellent fruit, as we have at the present day evidence of better cultivation, and growers now grow the better fruits which were less known at the time noted.

This variety is often mistaken for Gloria Mundi and Belle Dubois, but if the fruits are placed side by side it is soon distinguished, as Gloria Mundi is the less angular of the two, much paler green, and in my opinion not nearly so good as Lord Derby. In the north the Apple illustrated is one of the most popular kinds grown, and in cooking Apples size is not despised. Though a midseason fruit, it may be kept well into spring in a cool store. The flesh of this Apple is greener than is often seen in many of the large cooking varieties, and to this may be attributed its good keeping, as the dark green skin is hard and very bright at the time of gathering. Few Apples are better for exhibition than Lord Derby. This season I had fruits nearly 5 inches in height, and I noticed at the Royal Horticultural Society's show at the Crystal Palace on Sept. 30 some grand specimens of this variety exceeding the dimensions given above. No less than twelve lots were staged in the single dish class, and the fruits were very fine indeed also in the collections of dishes of cooking varieties.

As regards soil it does not appear fastidious, as I have it in very poor soil resting on gravel, and even thus the trees make a strong growth, indeed too strong, unless the roots are curbed. If on the Paradise stock there is less rank growth, and the trees rarely fail to crop freely. In suitable soils the fruit colours up well if not gathered too early, assuming a golden colour. It is at times used for dessert, and anyone who likes an acid flavour will find this to his liking, as at the season named the flavour is brisk and pleasant. It makes a grand orchard tree, as in this way the tree is given more liberty, making an erect growth, and is most valuable for market work. In all selections of Apples for cooking, keeping, and profit, I would give this a place if only a dozen of the best were selected, on account of its free-cropping qualities and absence of small useless fruits. For cordon culture I do not advise it, as it grows too strong, and if not frequently root-pruned the wood is gross. Lord Grosvenor, one of the Collins, is far better as a cordon.

G. WYTHES.

**Pear Comte de Flandre.**—I have only met with this Pear on one or two occasions, yet when gathered just at the right time and stored in a

cool room the fruit ripens up well and the flavour is very good. The fruit, moreover, keeps some time in good condition. One thing I have always noticed in connection with this Pear is that if grown in a shallow, light soil, or not supplied with water in a dry season, the fruits are almost sure to fall. Where it does well, gathering should be postponed till as late as possible, or the fruit will shrivel. In cool, moisture-retaining soil it does best, the foliage being large and of a very dark shining green colour. I have a healthy tree in upright cordon form on a west wall. This bears well in five seasons out of six. The only fault I have to find with this Pear is that it casts a portion of its fruit if allowed to get too dry at the roots.—J. CRAWFORD, *Coddington Hall.*

**Apple trees on mounds.**—Having a rough grassy bottom with a hard chalkstone base near to his kitchen garden at Lockinge, on which it was desired to plant Apple trees, Mr. Fyfe, having broken up roughly the bottom where each tree was to stand, carted in a load of rough soil to each one, put it down as a mound, then planted the tree on to it. The trees did remarkably well, and since then their root area has been added to

with advantage, as in finally transplanting where to remain and fruit, there need be little exposure of the roots, and the work can be done early in the autumn. In transplanting it is wise to prune back the roots of yearlings somewhat, the result is for the second transplanting clump of nice fibrous roots close home. Towards the spring the heads should be hard pruned also unless it be done when the roots are pruned at planting.—A. D.

### DAMSONS.

THE notes on Damsons by "S. B. M." (page 24) are well worth reading. He prefers the long fruited, oval-shaped varieties from a flavour point of view. On this point I am at one with him and think that no variety equals the well-known Shropshire or Michaelmas Plum, as it is sometimes called. There is a peculiar richness about the sort that one finds in no other. My opinion is that there is more deception attending the sale of Damsons than any other of the Plum tribe, and this neighbourhood and the midland counties generally a small blue Plum almost as large as



Apple Lord Derby.

by carting or wheeling to the mound all sorts of garden refuse or soil, which, decomposing, forms material into which the roots run. None can strike downwards, as the base is too hard and impervious. For that reason, no doubt, there is no evidence of canker. There are many trees of good varieties, and there was for the season on them recently very fine fruit. On the south-west side a dense Yew hedge offered needful shelter from occasional fierce winds that come from off the Berkshire downs.—A. D.

**Propagating bush fruits.**—The earlier in October good stout, straight shoots can be taken from the bushes of Gooseberries and Currants for the making of cuttings, and the more quickly planted, the better prospect of a good take and the forming of strong young bushes next year. The market growers, in putting down breadths by thousands, prefer yearlings, as cheaper and more likely to root quickly. In private gardens where a few dozen only may be grown in this way yearly, to keep the fruit garden or orchard well furnished, transplanting yearlings into a fresh nursery bed, giving more room and growing on into larger bushes a second year, may be done

by the Early Violet, and known to growers as the Damsene is often palmed off as a real Damson. The flavour is inferior to that of any of the Damsons, the fruit generally eating dry. I believe, however, that the flavour is much influenced by the soil in which the trees are grown and although I suppose no good reason could be given, it is a fact that the trees are in more gardens than not planted in shaded positions near large trees. Perhaps the hardy character of this fruit tempts people to plant thus, reserving the more open sunny positions for the larger sorts of Plum. Perhaps the most profitable Damson for market because the freest bearer, is the Farleigh Prolific Kent Cluster or Crittenden. It is well the planters should be made aware of these various aliases, as no doubt this Damson has in more than one instance been planted under all the names with the idea that they were distinct varieties. From a sale point of view this would not so much matter, but where difference of character and flavour is looked for it is disappointing. To prove that new Damsons are taking a much larger form, I may mention that a small Plum sent out by a leading firm has

ers been dubbed a Damson, as it partakes, as they think, more of the character of the latter than the former. This is now known by the name of the Prolific Damson. It bears wonderfully freely, carries a beautiful bloom, hangs a long time on the trees, being ready for use in August, and is of good flavour. I do not care for a sweet Damson, preferring that pleasant bitterness so prominent in the old Shropshire, but for those who would appreciate one as sweet as the choicest dessert plum, Frogmore Damson, an early variety and good yielder, is such. One great characteristic feature of Damsons of all sorts is their exceptional firmness, this no doubt being the reason why so many advocate planting in hedgerows and similar places. The thing is right enough in purely rural districts, but in the vicinity of towns it only leads to be so inclined to break the law of trespass, destroy the hedges, and steal the fruit.

J. CRAWFORD.

## SOCIETIES AND EXHIBITIONS.

### FRUIT SHOW AT THE CRYSTAL PALACE.

SEPTEMBER 30 AND OCTOBER 1 AND 2.

The general consensus of opinion with respect to this exhibition was that it fully maintained the high degree of excellence attained in previous years. There may not have been anything very startling as compared with previous shows, but the average quality throughout was remarkably good. Those exhibitors who a few years back would not hesitate to stage second-rate produce would find it quite useless to do so, hence there is a decided absence of second-rate fruit of any kind. With respect to the Apples, the general impression was that the size was rather under that of last year, but in compensation for this the fruit was as regards colour and firm, weighty fruit was all that one could desire. The same applies generally to the Pears, but there was an absence of spot, whilst they gave every indication of thorough good ripening. Peaches and Nectarines were fully up to the average in quantity and quality. Plums were present in good numbers too. Evidently most of the dishes were from walls, and, taking into consideration the lateness of the season, remarkably good. Grapes as a whole were no better, if so good as at previous shows. There were no bunches of abnormal dimensions, but there was a decided tendency to relinquish exhibiting the more inferior kinds. It was a treat to see the highly-finished bunches of Mrs. Pince's Bek Muscat. These were beyond any question the three best bunches in the show. The trio of Bek Hamburgs from the same source were also of splendid quality and finish. The three bunches of Chasselas Napoleon were beautiful examples, the clear pellucid appearance of the berries being most attractive; this is a fine Grape when in good condition. Of Madresfield Court there were two remarkable bunches, highly coloured and fine in berry. The winning three bunches of Muscat of Alexandria were models of good culture in every respect. The competition in the classes for collections of fruit was very much better than last year in all instances except in the nurserymen's classes. The two chief classes for general collections brought out some most commendable produce, and greatly in advance of last season. The taste also was evinced in the staging than previously shown. The same remarks also apply to collections of hardy fruits grown entirely in the open and those grown partially under glass; in both these classes some excellent produce was staged.

It is a pity the competition in the classes set up for nurserymen is not more keen than it is. This, in one class there were three competitors, but in all the rest it was more of a walk over. It may not be inferred by this that the exhibits in any case did not come up to the high standard of the best-known exhibitors, for they were of splendid quality in each case. Taken as a whole, the majority of the prizes for Apples and Pears

still continue to go to Kentish growers, but exhibitors from Sussex, Surrey, and other southern counties now bring up some first-class examples; hence the contrast between Kent and other districts is not, on the whole, so much in evidence as it has been. Special note should be made here of the magnificent exhibit of Apples from Monmouthshire. These betokened high-class quality and cultural skill to a remarkable degree. The miscellaneous exhibits were numerous and quite representative of our British-grown fruit. Most of this, of course, comes from small trees, but it indicates what may be done in the earlier stages of fruit trees. As regards the extent of the exhibition, it should be noted that there were in use nearly 1000 more plates than at the last show. This will afford some idea of the increase on the present occasion. This increase was not perhaps to many so apparent as it really was by reason of the more scattered character of the show this year in consequence of the, for a time, permanent exhibition of other industries. This resulted in different arrangements being made, which in nearly every case met with the approval of exhibitors. Those who staged in divisions 1, 3, and 4 had better positions most decidedly, more light and more convenience in every way. Mr. Wright and his assistants worked hard to make the arrangements as complete as possible, and it is gratifying to note that the results met with general approval by the exhibitors.

On each day of the show a lecture was delivered on various branches of horticultural industries. These will receive comments later on when more detailed reports are at hand.

#### DIVISION I.—COLLECTION OF FRUIT.

In the first class for twelve dishes of ripe dessert fruit there were three competitors, the premier award being rightly made in favour of Mr. Harris, gardener to Lady Henry Somerset, Eastnor Castle, Ledbury, who had a remarkably even exhibit and of excellent quality, whilst the arrangement was well balanced. These dishes consisted of fine Muscat Grapes and Gros Maroc, also good; the Pine-apple was Smooth Cayenne, an excellent fruit; Prince of Wales and Sea Eagle Peaches, both well finished, the former being specially well coloured. Apples Ribston Pippin and King of the Pippins were both represented in good condition. Pitmaston Duchess Pears and seedling Melon added to the effect. Of Nectarines there was a good dish of Albert Victor, and others of Coe's Golden Drop Plums and Brunswick Figs. Mr. Goodacre (gardener to the Earl of Harrington, Elvaston Castle) came in a good second, he having as his finest dishes a well-ripened Queen Pine and excellent Muscat and Black Hamburg Grapes, fine Pitmaston and Souvenir du Congrès Pears, and capital well-coloured fruits of American Mother Apple, with a good example of Hero of Lockinge Melon, Sea Eagle Peaches and Brown Turkey Figs. Mr. McIndoe (gardener to Sir Joseph Pease, Hutton Hall, Yorks) had on this occasion to be contented with third place. In the smaller class for eight dishes of ripe fruit, Mr. Reynolds (gardener to Messrs. de Rothschild, Gunnersbury Park, Acton) came well to the front, there being in all some six competitors. His dishes were, of Grapes, Muscats, well coloured, and large clusters of Gros Maroc, a fine-looking seedling Melon, Gladstone and Princess of Wales Peaches, capital fruits of Ribston Pippin Apple, with Coe's Golden Drop Plum and Pine-apple Nectarine. Mr. Empson (gardener to Mrs. Wingfield, Amphil House, Beds) was second.

#### GRAPES.

For six distinct varieties, two bunches of each, Mr. Reynolds was first, staging three white and three black varieties. Of the former, the Muscats were well coloured and of good size. The Chasselas Napoleon formed a striking dish, very fine in berry and clear in colour, and Buckland Sweet-water in its best condition; and of the latter, Black Hamburg, kept well and good in berry; Gros Maroc, large bunches and berries; and Ma-

dresfield Court, slightly over-ripe. Mr. Taylor, gardener to Mr. C. Bayer, Tewkesbury Lodge, Forest Hill, was a good second, having a splendid bunch of Madresfield Court and another of Muscat, with Gros Guillaume well finished; a weak pair of Trebbiano, however, detracted from this exhibit. For three varieties, in pairs, Mr. Cole, gardener to Sir George Russell, Swallowfield Park, Reading, won with comparative ease, having very superior Muscats, with colour and form of bunch at their best; Foster's Seedling, fresh and clear, and Alicante for a black. Mr. Jones, Ridgway Vineries, Cradley, Malvern, was very fortunate in being placed second with Gros Maroc, Gros Colman, and Alicante, all of good average merit, against fine Muscats, finer Gros Colman, and Gros Maroc from Mr. Harris. For Black Hamburg (three bunches) Mr. Mitchell, gardener to Mr. J. W. Fleming, Chilworth Manor, Romsey, was easily first with ideal bunches, finely coloured, Mr. Taylor in this case being second with bunches not so well coloured. For Madresfield Court, Mr. Taylor won the first prize in a most creditable manner, the bunches of medium size, but large in berry. Mr. Tidy, gardener to Mr. W. K. D'Arcy, Stanmore Hall, came in a good second. His bunches slightly lacked colour. For Gros Colman or Gros Maroc, Mr. Jones won with the former variety, both bunches and colour being first-class and the berries of extra size. Mr. Reynolds was second with good bunches of Gros Maroc. For Black Alicante the competition was very keen, there being but little to choose between all three prize-winners. Mr. F. Cole was placed first with handsome bunches, well coloured, Mr. J. Bury, Petersham Vineries, Byfleet, second, and Mr. Tate, gardener to Mr. Henry Tate, Park Hill, a very close third. For Lady Downe's Seedling Mr. Tidy was first with neat bunches of medium size but fine in berry, and Mr. Empson second with bunches a trifle deficient in colour. For any other black variety Mr. Mitchell was first with noble bunches of Mrs. Pince's Black Muscat, remarkably well coloured, and Mr. Smith, gardener to Mr. R. Ovey, Badgemore House, Henley-on-Thames, second with good clusters of Alnwick Seedling. For Muscat of Alexandria the competition was again very keen, but Mr. Cole won the first prize with ideal bunches of large size, long and tapering, with the beautiful clear amber finish so much desired but not always to be had; Mr. Goodacre was a good second, showing fine clusters, but with a slightly perceptible difference in colour. Mr. Reynolds followed closely for third prize. For any other white variety Mr. Reynolds was first with Chasselas Napoleon, fine in bunch and berry, Mr. Taylor taking second place with Buckland Sweet-water.

The competition in the one class provided for Figs was much better than last year, whilst none of the fruits was any too ripe, a most essential point in showing the Fig. Mr. Messinger, gardener to Mr. C. H. Berners, Woodverstone Park, Ipswich, was first with very fine Brown Turkey, of the ideal colour and of full size. Mr. H. Folkes, gardener to Mr. C. E. Strachan, Gaddesden Place, Hemel Hempstead, was second, again with Brown Turkey, whilst the third prize went to the same variety yet again, and that against larger and fine fruits of Brunswick. Quality with the judges had its proper weight. For a collection of hardy fruit grown entirely in the open, and to consist of not more than fifty dishes, Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, showed a remarkably fine even lot of fruit, which in addition was tastefully arranged with suitable foliage and other useful adjuncts to attractiveness. This exhibit comprised of Apples, fine dishes of Cox's Orange Pippin, Wealthy, Warner's King, Alfriston, Ribston Pippin and Cellini, and of Pears there were very good examples of Beurré Bachelier, Beurré Bultet père, Beurré Sterckmans, Doyenné Boussoch, Louise Bonne of Jersey, Beurré Diel and Brown Beurré, with Pitmaston Duchess. The Peaches comprised Sea Eagle, Golden Eagle, Nectarine, Barrington, and Late Admirable, with Walburton Admirable. Other dishes

comprised Coe's Golden Drop, Pond's Seedling, and Washington Plums, with the Shropshire Prune, Morello Cherries, Walnuts, and Nuts, as well as Sweetwater Grapes, making in all a well-varied exhibit. Mr. Powell, gardener to Colonel Brymer, M.P., Ilington House, followed closely, but not with so varied a collection. The finest dishes were those of Apples and Pears; of the former the best were noted as being of the well-known and approved varieties.

For a collection of not more than thirty-six dishes of hardy fruits grown partly or entirely under glass to illustrate orchard-house culture, Mr. R. Potter, gardener to Sir Mark Collet, Bt., St. Clare, Kemsing, Sevenoaks, was placed first, he having several remarkably fine dishes, notably Rond Noir and Brown Turkey Figs, Lady Palmerston, Golden Eagle, and Princess of Wales Peaches, Coe's Golden Drop Plums, and of Apples, Ribston Pippin, King of Tompkins County, Baldwin, Lady Henniker, and Emperor Alexander, with grand Pears, of which Marguerite Marillat, Pitmaston Duchess, Doyenné Boussoch, Doyenné du Comice, and Duchesse d'Angoulême were the finest; and the Grapes did not, however, add to the quality of this exhibit. Mr. McIndoe also showed well.

#### DIVISION II.—NURSEYRYMEN.

In the collection of fruit trees bearing fruit, though there was less competition than might be expected, the trees shown by the Messrs. Rivers and Bunyard were splendid, and illustrated what may be done by pot culture. In this class baskets of fruit were admissible, and here was seen the cream of the fruit staged in the building. Much of this was grown under glass, and was of splendid colour and finish. In the cases of these large collections medals were the awards given. The judges gave a gold medal as first prize to Messrs. Rivers and Son, Sawbridge-growth, for a magnificent display. The centre was a large pyramid tree of Cox's Pomona, with a number of trees dotted at the base of the collection. Of the less known and newer kinds, Bijou was laden with fruit, brilliant crimson in colour; Bramley's Seedling was very fine, and Bismarck appears to be a favourite pot tree. There were some superb Cox's Orange in baskets, also Peasgood's Nonsuch of great size. This Apple was well shown by most exhibitors. Of Pears, Pitmaston Duchess was shown 2 lbs. in weight, but we preferred the smaller Princess. Conference, Doyenné du Comice, Lebrun, Durondeau, Souvenir du Congrès, Duchesse de Mouchy, and Louise Bonne of Jersey were specially good. Peaches were less numerous, but Lord Palmerston and Golden Eagle were very fine. Plums were also excellent, Coe's Golden Drop, Primate, Grand Duke, Jefferson's and Decaisne being the best. There were some interesting fruiting trees of Crabs in variety and excellent fruiting Vines in pots, the varieties being Gros Maroc, Black Alicante, Muscat of Alexandria, Golden Queen and Hamburg—truly a superb collection. For a collection of hardy fruits grown partly or entirely under glass to illustrate orchard-house culture Messrs. Bunyard and Co., Maidstone, had no rival, but rarely has the firm made a grander display, the quality and variety being much admired. This collection occupied a large space, and was noted for the splendid fruiting trees of Apples in pots. Duke of York, a new Apple of 1895, was specially good, also the new Wagener, an American variety. Cornish Aromatic was fruiting freely. Of Pears, Le Lectier, a new late Pear of great merit, Beurré Fouqueray, Conference, Vicar of Winkfield, Durondeau, Marguerite Marillat, Pitmaston Duchess, Doyenné du Comice and General Todleben were excellent. The groundwork was composed of grand baskets of The Queen, Twenty Ounce, Emperor Alexander, the new Allington Pippin, Wealthy, and Washington Apples. Pot Vines were well represented, Gros Colman, Foster's Seedling, and Black Hamburg being staged, with Lord Palmerston Peaches, the little known Reculver Figs in pots, and baskets of Grapes, well meriting the silver-gilt medal awarded. Indeed, a gold one would have been more in keeping for the excellent culture and variety.

In the next class for 100 baskets or dishes of fruit there was more competition, and here Messrs. Bunyard and Co. received the coveted gold medal. Some of the finest fruits were staged here. A pyramid of Apples formed the centre, and the table was dotted here and there with light, fine-foliaged plants, the base being mounds of fruit. Some excellent Sweetwater Grapes represented fruit grown in the open. The fruits of Bismarck, Gascoigne's Scarlet, James Grieve, Stone's, Castle Major, Twenty Ounce, Rivers' Codlin, Royal Jubilee and Ribston were excellent. Pears were equally good, the best being Beurré Hardy, Nouvelle Poiteau, Conference, Doyenné du Comice, Jean Van Geert and Marie Louise. Mr. H. Berwick, The Nurseries, Sidmouth, Devon, came second with mostly baskets of fruit. This exhibit was noticeable for the high colour of the Apples. The fruits most prominent were the varieties named above, but Tyler's Kernel, Beauty of Kent, Bismarck, Annie Elizabeth and Cox's Pomona deserve special mention for their size and colour. The Pears were smaller. Some fine Dutch Medlars, Brown Turkey Figs and a few Plums were staged. The third place was taken by Messrs. Hartland, Louth Nurseries, Cork, and this firm is to be congratulated on their excellent exhibit, some of the kinds being rarely seen at shows. For not more than fifty varieties, Mr. J. Colvill, Sidmouth, was awarded the silver-gilt medal with excellent fruits, and tastefully arranged with fine-foliaged plants. There was more variety in this exhibit than usually seen, the large square baskets of fruit and small round ones making a nice display. There were very nice Pitmaston Duchess, Beurré Clairgeau, Brockworth Park, Marie Louise, Grosse Calebasse and Catillac Pears, very fine Lane's Prince Albert, Mère de Ménage, Cox's Pomona, The Queen, and Newton Wonder Apples, and good Plums, Medlars and Peaches. Mr. A. Wyatt, Hatton, Middlesex, was second with smaller fruits, but of good quality. For a collection of not more than fifty varieties of Pears there was only one competitor, and here Mr. Berwick, Sidmouth, secured the silver-gilt medal. The fruits lacked the size of those of last year's collections. We think this is a class which might with advantage be altered if made into two, one for gardeners. It would be well contested, as the largest class for gardeners is for twelve varieties only. One of the best exhibits was that of Mr. John Barham, Fair Oak Nurseries, Bassaleg, Newport, Monmouth, for not more than fifty dishes of Apples. Here there was no attempt to decorate, but the fruits showed special culture, and that Wales can produce fruit little inferior to that of Kent. The colour was equally good: indeed some kinds were even brighter (silver-gilt medal). Messrs. Hartland, Cork, took the silver medal with a very excellent collection, the fruits smaller. Munster Pippin (a very showy fruit), Stone Peach, White Square, Bank's Exhibition, Scarlet Tiffin and Kilderskin were very fine.

#### DIVISION III.—GARDENERS AND AMATEURS ONLY.

Here there was no lack of exhibitors, and, as is usually the case, the Kent growers had the lion's share of the awards. The strong competition from all parts of the country showed that cultivators are alive to the importance of good fruit culture, and this in a measure is due to the splendid conferences held at Chiswick a few years ago. For twenty-four dishes, sixteen cooking and eight dessert, Mr. Woodward, Barham Court Gardens, Maidstone, was first. Mr. A. Bayford, gardener to Mr. Lee-Campbell, being second with smaller fruits. Mr. G. Goldsmith, gardener to Sir E. Loder, Bart., was an excellent third, there being six competitors. In the class for twelve dishes, eight cooking, four dessert, six lots were staged. An excellent lot from the Bishop of Bath and Wells was disqualified, Baumann's Red Reinette being shown as a kitchen Apple. Mr. Pragnell, gardener to Mr. J. R. Wingfield Digby, Sherborne Castle, Dorset, was first, having very heavy Lord Derby, Warner's King, Peasgood's Nonsuch, Allrison, and Annie Elizabeth, with fine Ribston, King,

Cox's Orange, and Sturmer Pippins. Mr. W. Miller, gardener to Mr. T. W. Startup, West Farleigh, Maidstone, was second, some of the cooking fruits being very fine. For nine dishes, six cooking, three dessert, there was a poor show only two lots being staged. The first prize lot was excellent, there being grand Warner's King, Peasgood's, Sandringham, and Stone's, with Cox's Orange, Worcester Pearmain, and Washington. These came from Mr. Slogrove, gardener to Mrs. Crawford, Gatton, Reigate. Mr. Herbert, Nutfield Court, Redhill, was second with smaller fruit. For six dishes, cooking, there were six competitors. Here Mr. Woodward was first with highly-coloured Mère de Ménage, very fine Peasgood's Nonsuch, Warner's King, Stone's, and Lord Derby. Mr. W. Lewis, gardener to Mr. T. Oliverson, East Sutton Park, Maidstone, was second. For three dishes of Apples, cooking seven entered the list. Here Mr. Goldsmith was an easy first with grand fruits of Lord Derby, Peasgood's Nonsuch, and Warner's King, Mr. Powell being second with fine fruits, the weakest being Lord Derby. For six dishes of Bramley's Seedling Apple, Mr. W. King was first with fair fruits, well coloured; Mr. Turton, Maidstone, was second. For six dishes, dessert Apples there were nine exhibitors. Unfortunately, one was disqualified for showing Peasgood's Nonsuch as a dessert variety. Mr. Woodward was a good first, having very fine Baumann's Reinette, Gascoigne's Scarlet, Washington, Ribston, Cox's Orange, and Mother Apple. Mr. Miller second, having a splendid dish of Worcester Pearmain. For three dishes there were eleven lots, all good, Mr. Bayford securing premier honours, Mr. Kemp, gardener to Mr. C. R. Scrase-Dickens, being a close second. In the class for twelve dishes of Pears six lots were staged, and Mr. Woodward secured the premier award with splendid fruits of Durondeau (well coloured), Pitmaston Duchess (very large), Beurré Superfin, Ballet Père, Emile d'Hey, Duchesse d'Angoulême, Doyenné du Comice, Doyenné de Merode, Princess, Beurré Hardy, Gansel's Bergamot, and Marie Benoist. Mr. Goldsmith was a close second, his best being Souvenir du Congrès and Pitmaston Duchess. Mr. Powell had excellent Doyenné du Comice in the third lot. For nine dishes there were five lots, and all good. The premier award was well deserved. Mr. C. Terrell, gardener to Sir W. Geary, Tonbridge, having fine fruits, very clear in skin, and of the best possible varieties. Pitmaston Duchess was very fine, as were Beurré Hardy, B. Superfin, B. Bonne, and B. Rance. Mr. Jones, Wallington Bridge, Carshalton, was second, but we failed to see what others failed in this class if quality, not measure, was considered. For six dishes there were six competitors, and Mr. Messenger was first with good Beurré Ballet, Doyenné du Comice and Louise Bonne. Mr. Slogrove was a good second with similar varieties. For three dishes eight entered, and the first prize went to Mr. G. N. Field, gardener to Mr. R. Edward Sevenoaks, he having very large fruits of Doyenné du Comice, Mme. Treve, and Pitmaston this collection being noticeable for the clear skin and good colour. The second award went to Mr. G. Fennell, Fairlawn, Tonbridge, he having an excellent dish of Marguerite Marillat. For three dishes of cooking Pears only four staged. Mr. Woodward was first, Mr. Goldsmith being a close second. For one dish there were seven lots, Mr. Harris, East Grinstead, being first with Catillac. Mr. Barnes, Rutland Lodge Gardens, Petersham, was second with Uvedale's St. Germain, very large fruits. For Peaches, Nectarines, and Plums the competition was much stronger than last year, and the fruits very good. No less than ten staged for three dishes of Peaches, and Mr. Woodward again led, having very fine Sea Eagle, Prince of Wales, and Nectarine Peaches: Mr. Harris, Eastnor Castle, second, with Gladstone and Sea Eagle both excellent, but a poor dish of Lord Palmerston. For one dish there were thirteen exhibitors. Mr. W. Mitchell, gardener to Mr. J. Fleming, Chilworth, Romsey, being first with a grand

Sea Eagle, and Mr. Lane, Englefield Green, close second with excellent Stirling Castle. In his class Mr. Wallis, Keele Hall, Staffs, had a grand dish, but probably by accident the fruit was not named, or it would have been given an award. Nectarines were a weak class, the season being too advanced for these. Mr. Harris, East-pr, was first for three dishes, showing medium-sized fruit of Elruge, Albert Victor, and Pine-apple. The other prizes were not awarded. For the dish five entered, but they were wanting in colour and finish, the best being Victoria, from Mr. Strugnell, gardener to the Right Hon. W. Long, Rood Ashton, Trowbridge, Mr. Hill, Babram, second. The class for Plums brought forth more entries than one could have expected owing to the short supply this season. Mr. H. Folkes, gardener to Mr. C. Strachan, Hemel Hempstead, was first with four dishes of dessert varieties, giving good Golden Drop, Reine Claude de Bayay, late Transparent Gage, and Cloth of Gold, Mr. Vert, gardener to Lord Braybrook, Audley and, Saffron Waldon, being a good second, he giving a grand dish of Coe's Violet. For a single dish Mr. Vert was first with excellent Golden Drop, Mr. Turton being second. Twenty-two dishes were staged in this class. Five competitors entered for the four dishes of cooking Plums, Mr. Goodacre being first with Pond's Seedling, Polliath, Archduke, and Monarch, Mr. Sims, gardener to Mr. Gooch, Hemel Hempstead, being second. There were eleven competitors in the single dish class for cooking Plums, the Rev. G. Palmer (gardener, Mr. Osborn) being first with grand dish of Le Molt Lang, and Mr. Sims second with Monarch. For Gages, one dish, Mr. Messenger was first with excellent Reine Claude de Bayay, Mr. Herrin being second with Brady's late Gage. For Damsons or Bullaces there was only one entry, Mr. G. Fennell, Tonbridge, taking st with the Prune Damson, Crittenden and Bullaces.

## SINGLE DISHES.

## APPLES.

The single dish classes produced as usual some keen competition and the quality generally was high. A few of the classes failed to induce more than one or two exhibitors to come forward, this being simply a repetition of last year's faults, and the reason for including in a limited list varieties which never are shown in any quantity, to the exclusion of others that would make a better display, is not quite apparent. Dessert apples come first in the schedule, commencing with Adams' Pearmain. The first-prize dish came from Mr. W. Camm, gardener to the Duchess of Cleveland, Battle Abbey: second, Mr. G. Goldsmith, gardener to Sir E. G. Loder, Leonardlee, Dorset. Seven dishes in all were shown, and the first three were all excellent. Allen's Evering was a weak class, only three lots being shown. The first prize dish, a very good lot, came from Mr. J. Powell, gardener to Col. Lymer, M.P., Hsington House, Dorehester. Lumann's Red Winter Reinette was finely shown, all the fruits being well coloured and even. Mr. J. McKenzie, gardener to Mr. F. S. W. Cornwallis, Linton Park, sent the first prize dish; Captain A. J. Carstairs, Welford Park, Newbury (gardener, Mr. C. Ross), was second, and Viscountess Portman, Buxted Park (gardener, Mr. J. C. Prinsep), third. All three prize dishes were very fine. Ten dishes in all were shown. Blenheim Orange was not quite so good as usual. Fifteen dishes were shown, but only one or two of these were as well coloured as we are accustomed to see them at this show. The best dish came from Mr. W. H. Godden, gardener to the Hon. W. Buxton, Herts, and Mr. G. Chambers, Moorcocks Farm, Mereworth, Kent, came second with a nicely coloured dish of smaller fruits. Ewnee's Russet was shown in good form by seven exhibitors, Mr. Woodward being first with a nice dish, followed by Mr. H. C. Prinsep. Claydon Pearmain produced five dishes, the first and second prizes going to Mr. Woodward and Mr. Prinsep in the order given. Court Pendu Plat was well shown, fifteen dishes being staged. The first

prize went to Mr. J. C. Tallack, gardener to Mr. E. Dresden, Livermere Park, Bury St. Edmunds; second, Mr. C. Ross. Cox's Orange Pippin was, as usual, largely shown, twenty dishes being staged, and of these a dozen were really good, the best dish coming from Mr. W. Messenger, gardener to Mr. C. H. Berners, Woolverstone Park, Ipswich. This was an excellent dish of large, shapely, and well-coloured fruit; second, Mr. W. King, Gatton Park, Reigate. Only two exhibitors showed Egremont Russet, the first prize going to Mr. B. Miller, gardener to Mr. T. W. Startup, West Farleigh, Maidstone, and second, Mr. G. Goldsmith, whose fruits were a little smaller than the first prize lot, but very shapely and attractively coloured. Fearn's Pippin was a good class, fifteen lots being shown, the first prize going to Mr. Tallack, Livermere Park, for a good dish; second, Mr. McKenzie, Linton Park. This was a very even class, and most of the dishes highly coloured. Gascogne's Searlet was shown by seven exhibitors, and the highly-coloured fruits made a very attractive exhibit. Mr. McKenzie, Linton Park, came first with a handsome dish; second, Mr. J. Hudson, gardener to Mr. Leopold de Rothschild, Gunnersbury House, Acton. King of the Pippins was largely shown, nineteen dishes being staged and mostly good fruits. The first prize went to Mr. Tallack, Livermere Park, for a grand dish of large, well-finished fruits: second, Mr. J. Powell, Hsington House. King of Tomkins County was not largely shown, only five dishes being staged. Mr. T. Turton, gardener to Mr. J. Hargreaves, Maiden Erleigh, came first with a highly-coloured dish; Mr. Tallack followed with large fruits not yet coloured. Mabbot's Pearmain was shown only by Messrs. McKenzie and Prinsep, who took the prizes in the order here given: both dishes were very good. Mannington's Pearmain was rather poorly shown, though the prize dishes were good, that shown by Mr. Woodward especially. Mr. McKenzie came second. Margil was shown by ten competitors, the fruits being rather larger than usual, but except in one or two cases not well coloured. Mr. Woodward was first, Mr. McKenzie second. Of American Mother only six dishes were shown. Of these the first was very good indeed, and was staged by Mr. C. A. Bayford. Mr. McKenzie's second prize dish was also good. Of Ribston Pippin twenty-two dishes were staged, and a very even lot they were with one or two exceptions only. The first prize went to Mr. Woodward for highly coloured and shapely fruit; Mr. McKenzie second, with larger fruits, but not so ripe. Scarlet Nonpareil was not largely shown. Mr. Hudson, Gunnersbury House, was first with a very nice dish, Mr. C. Ross second. Sturmer Pippin was represented by nine dishes, and the first prize went to Mr. W. G. Pragnell, gardener to Mr. J. K. D. Wingfield Digby, Sherborne Castle, Dorset; R. Chamberlain second. Williams' Favourite was only shown by one exhibitor, Mr. J. Powell, who had a nice dish of fruit. Worcester Pearmain was largely and well shown, nineteen dishes being staged, Mr. W. King, Gatton Park, being first, Mr. G. Woodward second. In the any other variety class twenty-one dishes were staged and numerous varieties shown. This class is more or less of a seramble, such a large variety being brought in. The first prize went to a nice dish of St. Edmund's Pippin shown by Mr. McKenzie, second to Mr. G. Goldsmith for Gravenstein, and third to Mr. Woodward for a beautiful dish of Washington.

Kitchen Apples commence with Alfriston, Mr. McKenzie, who was very strong throughout these classes, came first with splendid fruits, Mr. Woodward second. Seven dishes were shown. With Beauty of Kent, Mr. R. Chamberlain came first with a fine dish, Mr. Woodward second. Nine dishes were shown. Eleven good dishes of Bismarck were shown, Mr. McKenzie being well in front with a fine dish; Messrs. Woodward and Ross followed. Bramley's Seedling was not strongly shown, only four lots being staged. Mr. C. A. Bayford was first with a fine dish; second, Mr. W. Lyon, gardener to Mr. J. H. Salmon,

Holly Bank, Rowton. Thirteen dishes of Cellini, a very even lot, were shown, Mr. G. Goldsmith coming first, Mr. Bayford second. Cox's Pomona was also finely shown; seventeen dishes of large and highly coloured fruits were staged. Mr. McKenzie was first with a heavy dish. Duchess of Oldenburgh was not very well shown, the first prize going to Mr. Culton, Diklawn Gardens, Castle Douglas, N.B., who was well ahead of the other competitors. Dumelow's Seedling was well shown; sixteen dishes were staged, and none were weak. Mr. McKenzie was placed first for a nice dish; Mr. Pragnell second. Ecklinville Seedling made a good class of fifteen dishes, Mr. McKenzie being first; Mr. J. Spottiswood, Queen's Park, Brighton, second. The first prize dish was a very good one, clear-skinned, and fine. Emperor Alexander was not quite so largely shown or so well coloured as on former occasions, but ten dishes were staged, and all very good fruits. Mr. McKenzie was first with a very fine dish, and Mr. Woodward second. Mr. McKenzie was again placed first for Frogmore Prolific, and Mr. Bayford second. Six dishes were staged. Golden Noble made a very attractive exhibit, and the fruits have seldom been seen in better form. The first prize dish, from Mr. G. Chambers, Moorcocks Farm, Mereworth, was a very handsome one. Mr. Woodward came second with heavier fruits. Golden Spire brought out six exhibitors, and the first prize went to Mr. G. Woodward for a very fine dish. Only three exhibits of Grenadier were made. Lady Louisa Fortescue, Dropmore, Maidenhead (gardener, Mr. C. Herrin), was first for a good dish. Hawthornden (New) only brought out four exhibitors, and among these Mr. Woodward was first for a very good dish; Mr. A. Brooks, of Latter's Farm, Mereworth, was second. Mr. McKenzie was first of two exhibitors only for Hornead's Pearmain, and staged an excellent dish. Lane's Prince Albert brought out a fine exhibit of fourteen dishes, the best coming from Mr. C. Ross, of Newbury, followed by Mr. Bayford and Mr. Woodward. Lord Derby was another good class in which Mr. G. Fennell, gardener to Mr. W. M. Cazalet, Fairlawn, Tonbridge, was placed first. Lord Grosvenor was a weak class, only four dishes being shown, but that from Mr. Woodward, taking first prize, was fine indeed. Lord Sutfield brought out fifteen competitors, and most of the dishes were very good, Mr. McKenzie's, which was placed first, being excellent. The second prize fell to Mr. Woodward for a fine dish. Mère de Ménage was shown in fine condition and colour by seven exhibitors, and of these Mr. McKenzie was placed first. Smaller samples, but of the deepest colour, from Mr. C. Ross, Newbury, were placed second. Of New Northern Greening an excellent dish was shown by Mr. C. Ross and placed first; only three competitors came out for this class, and no third prize was given. Two classes were made for Newton Wonder to prevent clashing between northern and southern growers. The best dish in either class came from Mr. J. Hill, of Babraham, who, under the conditions, was placed among northern growers. Mr. R. Edwards was first in the southern section. Only six dishes were shown in all. Peasgood's Nonsuch was as usual finely shown, Mr. McKenzie being placed first out of nine competitors, the Lord Bishop of Bath and Wells (gardener, Mr. A. W. Mackenzie) being second. For Pott's Seedling Mr. Turton was placed first, eleven dishes being staged; Mr. Woodward was second, and Mr. Hudson, Gunnersbury House, third, for the heaviest dish shown. Only one dish of Royal Jubilee was shown. This came from Mr. C. Ross, and fully merited the first prize it obtained. Eight dishes of Sandringham were put up, and were mostly good, but varied considerably in form and colour, only one or two dishes showing the characteristic mottling. Mr. McKenzie was placed first, Earl Percy, Syon House (gardener, Mr. G. Wythes), coming second with smaller fruits, but in excellent character. Four good dishes of Spencer's Favourite were shown, the first coming from Mr. Woodward; second, Mr. W. Jones, gardener to Mr. G.

R. Brougham, Wallington Bridge, Carshalton. Stirling Castle brought out ten dishes, Mr. McKenzie being placed first with a very good dish; second, Mr. W. Strugnell, gardener to the Right Hon. W. H. Long, Rood Ashton, Trowbridge. Of Stone's, six dishes were shown, Mr. McKenzie coming first with fine fruit, and Mr. Woodward second. In the class for The Queen the same exhibitors took first and second prizes in similar order. Tower of Glamis, of which eight dishes were shown, was not a very strong class, except for the first prize dish from Mr. McKenzie. The same exhibitor was first for Tyler's Kernel, a first-rate dish, only three lots being staged. Warner's King was a strong class of twenty-three dishes, and here again Mr. McKenzie led with a splendid lot, being followed by Mr. G. Chambers. A well-filled class was that for "any other variety" of kitchen Apples, and the prizes went to good dishes of Dutch Codlin, Lady Henniker, and The Major, respectively shown by Mr. McKenzie, Mr. W. Camm, of Battle Abbey, and Mr. G. Fennell, the Dutch Codlins from Linton being grand fruits. Seventeen dishes were shown in this class.

#### PEARS.

These generally were good, but the classes were not so well filled as were those for Apples. Eight dishes of Bergamot d'Espere were shown, and the prizes fell to Mr. J. Powell, Ilslington House, Mr. C. Ross, and Mr. Woodward in the order given. Beurré Bosc was fine, four dishes especially so; one exhibitor showed in this class a nice dish of Doyenné Boussoch; the first prize dish came from Mr. G. Goldsmith; second, Mr. W. Cotterell, gardener to Sir W. N. M. Geary, Bart., Oxon Heath Park, Tonbridge. Mr. Woodward showed the only dish of Beurré d'Anjou—very good fruits. Thirteen dishes of Beurré Diel were staged, and here there seemed to be some error of judgment, as Mr. Wythes's dish, placed second, should have been first, the fruits being finer and clearer than those of Mr. Woodward placed first. The best dish of Beurré Dumont was staged by Mr. Woodward, only two lots being shown. Beurré Hardy was represented by seven dishes of very clean fruits, Mr. Woodward being first with a grand dish, and Mr. Prinsep second, only a little behind. Eleven good dishes of Beurré Superfin were shown, Mr. Woodward and Mr. Goldsmith being first and second. Only one good dish of Williams' Bon Chrétien was shown, this coming from the Earl of Galloway, Galloway House, Garlieston, N.B. (gardener, Mr. J. Day). Mr. Turton was first in a weak competition for Comte de Lamy. Conference was staged by five exhibitors, the first, very good, coming from Mr. Woodward, who was followed by Mr. W. Slogrove, gardener to Mrs. Crawford, Gattou Cottage, Reigate. Six dishes of Conseiller de la Cour were shown, that from Mr. Tallack being a fine lot and well ahead of the others. A grand dish of Doyenné du Comice secured for Mr. Powell the first prize out of ten exhibits. Mr. Goldsmith had the best dish of Duchesse de Bordeaux, two dishes only being shown. Eight good dishes of Durondeau were shown, Mr. Woodward taking first place and Mr. Pragnell second. For Easter Beurré, first place was taken by Mr. B. Calvert. Emile d'Heyst was a weak class of three dishes only, Mr. Woodward securing first place. Fondante d'Automne secured four entries of very fair fruits, a good dish from Mr. A. Basile, gardener to Rev. G. L. Powells, Woburn Park, Weybridge, taking first place. The first and second prize dishes of Fondante de Thirriot, which came respectively from Mr. Woodward and Mr. Messenger, were excellent examples of a very fine Pear. Nine good dishes of Glou Moreceau were shown, the first prize going to Mr. Powell for excellent fruits; Mr. Woodward was second and Mr. Calvert third. Mr. Powell was again first for Josephine de Malines, Mr. J. W. Herbert second, and Mr. Calvert third. There were thirteen dishes staged in all. The class for Louise Bonne of Jersey was a very attractive one, as all the fruits shown were very clean and highly coloured. The first prize went to Mr. J. Coles (gardener to Mr. H. F. Walker,

Higley, Balcombe, Sussex); Mr. Messenger was second. Ten dishes in all were shown. Only three dishes of Marie Benoist were staged. Mr. Woodward came first with a fine lot, Mr. Messenger second. Marie Louise was a good class of ten dishes. As was the case last year, colour secured the principal awards. Mr. B. Osborn was first and Mr. Woodward second. For that very poor Pear Marie Louise d'Uccle, Mr. Cotterell was placed first out of seven exhibits with a very fine dish. Marguerite Marillat was finely shown by Mr. G. Goldsmith and Mr. Edwards, of Beechy Lees, and the prizes were awarded in the above order. Three out of the five dishes of Nouvelle Fulvie were very good, and these were shown by Mr. Woodward, Mr. Goldsmith and Mr. Wythes. A weak entry only was secured for Olivier de Serres. Mr. G. Goldsmith showed a nice dish, which secured first prize from three other exhibits. Twelve fine dishes of Pitmaston Duchess were shown. Mr. Cotterell was first for an excellent lot, Mr. Woodward second with rather smaller and riper fruit. Three nice dishes of Seckle were exhibited, the best a very good lot from Mr. C. Ross; second, Mr. Turton. Messrs. G. Goldsmith and G. Fennell were the only exhibitors of Souvenir du Congrès and were placed in the above order, the first prize dish an excellent one. Five dishes of Thompson's showed no very great merit, except the one from Mr. Powell, placed first. Of Winter Nelis there were twelve dishes, Mr. Woodward being first and Mr. Goldsmith second. The "any other variety" class brought out nice dishes of various Pears, Mr. Woodward being placed first for a grand dish of Gansel's Bergamot, Mr. Spottiswood coming second with Doyenné Boussoch, and Mr. Goldsmith third with Princess. Other excellent dishes among the nineteen exhibited were Mme. Treyve, Chaumontel and Brockworth Park.

For the Veitch prizes for flavour over forty dishes of Apples were staged, the majority being Ribston and Cox's Orange Pippins. Many varieties were included that stood very little chance of winning under present rules, and the necessity for eliminating varieties that have won a certain number of times becomes more apparent at each meeting. Mr. H. C. Prinsep repeated his success of last year, again showing Ribston Pippin in prime condition; and Mr. Herrin was second with Cox's Orange. In the corresponding class for Pears, Mr. B. Osborn was first for Louise Bonne of Jersey, and Mr. Cotterell second with Fondante d'Automne. Over thirty dishes were shown, and the judges' palates must have been much tried in testing for flavour so many Apples and Pears at one time.

#### MISCELLANEOUS EXHIBITS.

A much greater space was filled this year with miscellaneous exhibits, and some were most attractive, the plants and flowers giving a bright finish to the lines of fruit. First in the order of merit must be placed the collection from Mr. Thomas, The Royal Gardens, Frogmore. Here were grand Pine-apples, excellent Muscat of Alexandria Grapes in baskets, Peaches, Melons, Black Hamburg Grapes, Plums in variety, hardy fruits, and Tomatoes. From the Royal Horticultural Society's Gardens were sent forty-four varieties of Pears and some twenty kinds of Grapes, including a bunch of Gros Guillaume weighing 8 lbs., Black Hamburg, Muscat Hamburg, Mrs. Pince, Alicante, and Alwick Seedling. Pears were staged in quantity, the best being Princess, Thompson's, Beurré Bosc, Doyenné du Comice, Flemish Beauty, Emile d'Heyst, Napoleon, and Uvedale's St. Germain. Messrs. Veitch, Lim., Chelsea, staged a large quantity of fruit, 160 dishes in all. The Apples were excellent and the Pears good, the bright Physalis Franchetti being largely used in decoration, also Rosa rugosa, the fruit being nicely arranged. The same firm had a charming group of Nerine Fothergilli major nicely arranged with Ferns. The plants were the finest we have seen of late; many of the small pots had bulbs carrying three or four trusses. Messrs. Cheal and Son, Crawley, Sussex, had large groups of Dahlias and a good

collection of fruit, 180 dishes of Apples and Pears, the centre of the table being fruit trees in pots laden with fruit, the base filled in with baskets of Apples some twenty in number, and comprising the best varieties in commerce. This formed a pleasing exhibit. Messrs. Laing and Sons, Forest Hill, staged ninety dishes of Apples and Pears in variety, the centre of the table being filled with Orange trees bearing fruits freely. This firm also exhibited a fine collection of herbaceous plants, Dahlias, Chrysanthemums, Begonias, Streptocarpus, and Nephentes Mastersiana. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, had a splendid exhibit of hardy flowers in great variety, and Dahlias well arranged with Begonia seedlings lifted from the open air. Messrs. Paul and Son, Cheshunt, had Roses in great variety, both in pots and as cut flowers. There were baskets of hardy Cyclamens and other herbaceous plants in variety. Fruit was likewise staged largely, including Apples, Pears, and Plums. Messrs. W. Paul and Son, Waltham Cross, had a splendid collection of cut Roses arranged in baskets and boxes. The new China Rose Queen Mab, Enchantress, Cramoisi Supérieur, Marchal Niel, Sylph, Medea, and Marie van Houtte with numerous hybrids, and twelve varieties of Roses raised at Waltham Cross were in good condition. Messrs. Harkness and Sons, Bedale, sent a large collection of herbaceous plants, Roses in variety and of excellent quality, Lilliums, Chrysanthemums, and Carnations, the chief feature of the collection being some fine seedling Gladiolus from Messrs. Williams, Holloway, came a nice group of fine-foliaged plants, including grandly coloured Crotons, Dracenas, Palms, and Ferns. The beautiful Croton Emperor Alexander was in fine form. From Reading, Messrs. Sutton sent fine display of Tomatoes arranged in baskets perfect fruits of the best varieties. Perfection Golden Queen, Eclipse, Sunbeam, The Sutton A 1, Peachblow and Pomegranate were the kind staged, and, being shown in quantity, were much admired. Messrs. Fisher, Son, and Sibray, Handworth, Sheffield, sent a good collection of Apples and a few Pears. The former were excellent, at the whole well set up. Mr. W. Horne, Per Hill, Rochester, had good Apples and Pears in groups. Messrs. Spooner, Hounslow, had large collection of Apples and Pears, including twenty baskets and about sixty dishes of the best varieties of Apples and Pears. Mr. B. Well Crawley Fruit Nursery, had a small collection of Apples and Pears in variety. Mr. W. Well Earlswood, sent cut Chrysanthemums arranged in glasses. The Horticultural College, Swanley, arranged a table consisting of preserved fruits in bottles, with Grapes in variety, Melons, Apples, Pears, and Tomatoes. Messrs. W. Gaymer, Atterborough, had fine Apples of a few varieties on a stand erected on a table. Messrs. Peed and Sons, Streatham, had 120 dishes of Apples and Pears, Grapes Gros Maroc, Madresfield, and Alicante, and excellent hardy fruits in great variety. Messrs. Cannell and Sons, Swanley, had several groups, one composed of Cannas in pots, also one of Physalis Franchetti nicely arranged. Mr. A. W. Young, Stevenage, sent Dahlias, Aster Lilliums, and hardy herbaceous flowers, with collection of Gourds and Tomatoes.

**Royal Horticultural Society.**—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 12, at the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Some Curiosities of Orchid Breeding" will be given by Mr. C. C. Hurst at 3 p.m.

**Names of plants.**—*Countances.*—Virginia Poke (Phytolacca decandra).—*E. Cecil.*—1 and probably forms of Dendrobium Wardianum; 3, Dendrobium primulinum; 4, Epidendrum vitellinum.—*W. L.*—Cannot undertake to name Crotons.—*H. B.*—1 and 2, forms of Impatiens glandulifera; 3, Chelone obliqua.—*D. C.*—1, Aster paniculatus; 2, A. laevis var.  
**Names of fruit.**—*J. W. Burns.*—Pear, probably Beurré Rance.—*W. L.*—Conical fruit Adams' Pearmain, the flat fruit Fearns' Pippin.

# THE GARDEN.

[OCTOBER 16, 1897.]

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## CHRYSANTHEMUMS.

### COLOURS IN CHRYSANTHEMUMS.

NOTWITHSTANDING the number of new varieties there are being introduced each year, I think it may be said we are advancing but slowly in the matter of rich, highly-coloured kinds. Whites and yellows are fairly plentiful, and it hardly seems possible to improve them. They may be had in various and beautiful types of form, but good reds would be most welcome. It was about ten years back that the variety E. Molyneux started the Chrysanthemum world by the colour of the blossoms then exhibited, and even now there is nothing to approach it. This variety, however, appears to have had its constitution impaired by the high culture necessary to obtain large blooms, and is rarely seen in anything like good form. Time after time one comes with plants of E. Molyneux having small crumpled foliage where it should be well developed and leathery, and the flowers refuse to put out on long peduncles away from the leaves—a sure sign in the case of this sort that excellent blossoms will follow. Several growers whom I know have from various sources changed the stock with the hope of a return to former vigour, but this has not assisted them.

In late years Mr. Seward's seedlings have given us more of the needed colour than have those of other raisers. One can imagine he has used Mrs. Falconer Jameson as a parent plant pretty freely, as many of his varieties partake of that kind in habit of growth. Many of them, too, have a similar tendency to produce the bloom-buds late in the year, hence a number of failures with them. Dorothy Seward, Mrs. John Shrimpton, of last year's notes, and John Neville, of this, must be topped in early spring to obtain buds soon enough to develop into large flowers. To return to highly-coloured Chrysanthemums. William Seward was a splendid gain, but this somehow is not seen in good form very often. It loses its rich crimson tint very quickly, and as large

blooms take a considerable time to open, the lower portion becomes dingy before the top florets are out. Apart, however, from large blooms, there is no other variety to equal the sort named in its rich dark crimson tint. Jeanne Délaux, which was known before William Seward, appears to be quite gone out of cultivation, but if well grown there would yet be room for it. The growth is not of the robust order; this, no doubt, caused many to discard it. William Holmes, Cullingford and John Shrimpton are all flowers of extra good colour for medium-sized blooms, but they cannot be produced large enough for exhibition. I thought by the blooms which M. Calvat first exhibited of C. H. Payne that a rich vivid crimson sort of surpassing beauty was obtained. This, again, has been a failure in the hands of British growers. Mr. A. G. Hubbuck gives us a nice shade of crimson-brown, and the habit of the plant is very sturdy. I am, afraid, however, that the sort will not take the place of E. Molyneux. M. Geo. Biron has flowers of a good crimson hue. The fault of this, however, is that it loses its leaves in most cases, and is therefore an ungainly plant. Dorothy Seward is a richly-tinted sort; terra-cotta-red. It keeps the colour well, and is in form and size most desirable. John Neville promises well. The colour, light crimson with buff reverse, is bright and taking. This is a handsomely-formed blossom, with long, trailing florets. Joseph Brooks is not yet open. This sort was one of the richest coloured of last year's new ones. That old variety Miss Dorothea Shea supplies a very nice deep terra-cotta shade when well grown, and is most attractive in a collection.

Pride of Madford is by far the best variety of a violet-crimson tint; but, like others of that colour, it sometimes exhibits too much of the lilac shade on the back of its petals. This is an Australian variety. I believe a crimson-coloured sport from it exists. This will be welcome when introduced generally. Nyanza has blossoms of the deepest possible crimson shade,

and is a magnificent sort when seen at its best. It is rather uncertain, but I fancy it will be esteemed for the supply of late blooms when better known. That dwarf-growing kind M. Chenon de Léché has most distinct colouring, and Col. W. B. Smith is a variety by itself with its lively shade of bronzy yellow. Mme. Marius Ricoud has rose-coloured flowers of a brighter tint than is to be found in any other sort, and Vivian Morel is distinct in its mauve shade. Golden Gate must be grown for its shade of tawny-yellow colour; it is a splendid variety. Thomas Wilkins has blooms of a somewhat similar shade, and is an excellent kind. Mrs. John Shrimpton gives us a most distinct shade of bronze, but there is a dead look about it that does not please me.

Yellow Chrysanthemums are very charming. I know of none so perfect in finish as is Edith Tabor. We have a deeper yellow in Modesto. The petals of this, too, have first-rate substance, and it is certain to become popular. Phœbus and Oceana are also two very fine yellows. The former reflexes its petals; the other is an incurving kind. They are models of different types. I am looking forward to seeing fine blooms this year of Calvat's Australian Gold; it is now most promising. Being widely distributed, the variety will have a better chance this year than it did last. It seems to grow well under any conditions. The variety Mme. Carnot will not be easily surpassed as a show flower among whites. This and Mme. Ad. Chatenay are grand types, the one drooping in form, the other incurving. They will have plenty of rivals this year in such as Mrs. J. Lewis, Baronne A. de Rothschild, Simplicity, Western King, and Mme. Gustave Henry. Then Mutual Friend, Mlle. A. de Galbert, Souvenir de Petite Amie, and other older kinds are too fine to be discarded. H. S.

Chrysanthemum W. G. Newitt is a first-rate white kind. It is of American origin, and is a failure if the plants be grown in the natural way. The points of the shoots must be topped

in March, this causing the formation of early flower-buds. From plants so treated blooms are each 6 inches across and of similar depth. The florets droop gracefully, making a fine show on stems not 3 feet high from the pots.—H.

**Chrysanthemum A. H. Fewkes.**—This Japanese variety not being one of the huge-sized ones has caused many to discard it, but it is an exceedingly fine sort for general culture. It is yellow, of a rich dark shade, and the flowers are of capital incurving form. Its growth is dwarf and sturdy, the foliage being retained to the last. The flowers are borne close to the leaves, a point of some importance when they are used for cutting.—H.

**Chrysanthemum Mychett White.**—This is a new variety which is sure to be in demand. Plants which were freely disbudded have developed a goodly number of large and handsome flowers, and others grown with very little or no disbudding are covered with charming little blossoms. They may be cut in sprays or individually, and each flower has a footstalk of a useful length. The blossoms are of the purest white, with fairly long fluted petals, and under glass are beautifully pure. I am growing this new sort in the open border, and here it is doing well, being a mass of bloom.—D. B. C.

**Chrysanthemum Mrs. H. Weeks.**—I am afraid there will again this year be no end of failures with this variety, because many growers did not top the plants in the spring. In early October I noted instances where the flower-buds were not showing, and certainly in such cases there will not be time for blooms to develop into large ones. This is essentially a show flower, and a very handsome one, its pearly white blooms having been grown to enormous proportions. Probably the best way to cultivate it is to strike the cuttings rather late, say February, and allow it to grow on with one stem in a pot not more than 8 inches across, selecting the first flower-bud.—H. S.

**Chrysanthemum Ivy Stark.**—The blossoms of this sort should be welcomed by those who complain of want of brightness in the early-flowering varieties. Just now it is coming into bloom, the colour being a very bright shade of golden orange; in fact, when freely di-budded it is not unlike a bright flower of the well-known mid-season variety, Source d'Or. In the border it is succeeding very well, each of the plants, owing to its fine branching habit, being of large size and blossoming most profusely. Each flower has a good footstalk, so that individual ones may be cut, or, if preferred, handsome sprays of four or five pretty flowers make an effective display for a small vase. The constitution is robust and the height from 2½ feet to 3 feet. This variety should be in demand for market work.—D. B. C.

**Chrysanthemum Piercy's Seedling.**—I saw this most useful autumn-flowering Chrysanthemum in fine form at Kelham Hall a week ago. The colour (a bronzy yellow) is very popular just now, and trusses sell well. The plant is of exceptionally dwarf habit and a most prolific bloomer. Mr. Webb (the gardener at Kelham) considers it one of the very best for market during September. The flowers stand damp weather and rain much better than those of some of the autumn-blooming varieties—Mme. Desgrange, for instance, which soon decays if damp settles on the petals. In various lists of autumn varieties I have looked through, no mention is made of Piercy's Seedling, so that I do not think it is as yet very generally known. The private gardener will find it as useful as the grower for market.—J. C.

**Chrysanthemum Mme. Desgrange and its sports.**—I was not aware until reading the remarks in THE GARDEN on the display of autumn-flowering Chrysanthemums at the Aquarium of the existence of Mrs. Hawkins, described as a yellow sport from the original straw-coloured Desgrange, but I am acquainted with Mrs. G. Wernig, also a golden sport from the same variety. As seen at Kelham Hall just now it appears to be quite as free as

its parent, and is much appreciated, as good yellows always sell well, particularly in autumn, when few sorts of that colour are obtainable. I particularly noticed the effect housing the old Mme. Desgrange as soon as the buds began to open had on the colour of the expanded blooms. The large batch at Kelham was arranged in a long span-roofed house and beneath the partial shade of Tomatoes. The few blooms that were open at the time of my visit were white enough for wreath-making, and Mr. Webb informed me that in an ordinary house, even when no shade was given, the blooms came of a good white shade. The original Desgrange is still a favourite with market growers. At the beginning of September I saw near Norwich 3 acres or 4 acres of this variety in the pink of condition. Care is taken not to plant too thickly so as to encourage mildew, and towards the end of the month the greater part of the blooms is cut and sold in bunches in Norwich market, this extending over several weeks, while a small proportion of the plants is lifted and sold cheaply for window plants. In this particular neighbourhood land is very high priced, yet I was informed on good authority Chrysanthemum growing paid far better than any corn crop that could be grown.—J. C.

## ROSE GARDEN.

### ROSE MARECHAL NIEL.

ALTHOUGH not always reliable in the open, who of us cannot recall more than one grand plant upon a house or wall, especially when the position was partly sheltered? I have seen it in magnificent form in all aspects, even facing due north, but the safest and best position is one due south and provided with partial shelter against strong south-west winds. This season I have several maiden standards that have given a really good autumn crop of bloom, and very welcome the flowers are; indeed, Maréchal Niel is never out of place. Occasionally we get a few good flowers late in the summer, but as a rule this grand old favourite only gives one good crop, and that upon wood made the previous summer. This fact is partly my reason for giving a few notes at such an apparently unsuitable date.

Surely such valuable wood is worth a little care and protection; and if we should be visited by severe frost, especially if bright sunny days accompany the frost, I would warn against the serious harm accruing to wood that is alternately frozen and thawed. At night everything is frozen hard, while when the sun rises a warmly-situated front of a house is often several degrees above freezing point. I am convinced that many a good crop of blossom has been lost through these extremes following one another so closely and being repeated so many times during a spell of severe weather. I would meet it by fixing a mat over the wood as the sun sets, removing this again directly the air has felt the influence of sun warmth once more. It is not so much that Maréchal Niel is tender as the fact that it does not seem able to withstand severe fluctuations. If tender, how is it we so often find a grand old specimen upon a north wall? Here we frequently get some of the grandest flowers, they coming a little later and escaping the sudden changes of temperature experienced by those in the front of the house.

Unfortunately, this Rose is more subject to canker than others. It is a puzzling disease. Among plants that have been treated exactly the same and are of similar age we may find canker on one, while the others will continue to grow away healthily for many more seasons. Then, if we put in a second specimen in place of the affected plant, it is quite as likely to grow away in a healthy and vigorous manner as

it is to develop canker similar to its predecessor. I feel sure that all observant Rose growers will be in accord with me when I say there is much to be learnt before we can successfully battle with this terrible disease. We may be convinced of several facts that apparently conduce towards this disease, but when we are so frequently confronted with specimens under the same conditions, and yet absolutely free, it would be rather bold to state with any degree of certainty what is the cause, or remedy for, canker. My advice is to root out the plant immediately after its next crop bloom has been secured and plant afresh. The variety will soon cover a large space, and the blank is not of long duration. On the other hand, we sometimes find an old plant bearing many cankered joints, and yet annually producing good wood and blossom. But this is an exception rather than the rule, and I believe wiser to replant at once. Give it good soaking and thorough soakings while in flower and bloom, also when making its first summer shoots. Do not prune away more than can be helped of last season's wood, and take little trouble as regards protection from sudden extremes of temperature.

When we come to the cool conservatory slightly heated greenhouse, what more generally favourite for the back wall or roof can possibly have? Here it may be depended upon to give a good crop of bloom, and such bloom as we very seldom see in the open. Do not restrict the root-run, treat it generously, keep free from insect pests from the first, and above all do not start it into fresh growth too early. Many start a plant early in the year, perhaps during a spell of brighter and milder weather and are not able to keep up a suitable temperature during the end of February and through March, a time when new growth is abundant and we are often experiencing most trying weather. Retard the plant as far as possible and when it will grow in spite of this treatment, give it every assistance. You will be surprised at the rapidity with which such a plant will overtake one that was started some weeks earlier, but which received a slight check at it had made growths of 3 inches or 4 inches. I would always severely summer-prune this Rose under glass, cutting out the wood as soon as it has flowered. This severe pruning also admits more light for other subjects at a time when such is indispensable. If a plant is growing the border near an outside wall, cover over the outside soil with short litter or light stable manure, as many of the roots are certain to penetrate below the foundation of the wall and get into the outside soil. R

**Mildew on Roses.**—At page 216 "Amateur" asks for a remedy for mildew on Roses. I can confidently recommend the following, which I learned from Mr. Tallack, Livermere Park: Three pounds of unslacked lime, 4 pounds of sulphur, and 1 gallon of water. Boil all together for forty minutes, leave standing till clear, then bottle into the clear liquid. Dilute when wanted from ¼ to ½ pint in 3 gallons of soft water, and use through a spray. Do not bring the solution into contact with painted surfaces. It is advisable to make several gallons at a time.—J. CRAWFORD.

**Rose William Allen Richardson.**—I have seldom seen this pretty Rose bloom so continuously and well as it has done this season. During the great heat in the middle of the summer it was almost the only one here I could cut even fairly good buds and flowers from, and although since the weather has been cooler many other kinds are in better order, this is still full of flower, the individual blooms having the deep orange tint well developed. It is one of those Roses that will

if the shoots are cut hard back every year; the more it is left alone in reason the better.—H. R.

**Rosa rugosa Blanche de Coubert.**—A group of Rose at Kew is particularly pleasing. The one is equally as handsome as that of the *Rosa rugosa*, while the blooms are of that constant white common to *R. rugosa alba*. Instead of being single, they are, however, semi-double, light in outline, and really charming. *Rosa* and its varieties are very ornamental, flowering as they do throughout the season, and brightly-coloured fruits may be found on bushes at the same time as the later blooms. It is sometimes difficult to get the varieties of *Rosa* on their own roots, in which case it is better to plan to layer the shoots as soon as they are sufficiently long, when they will push out roots of their own, and in time form quite a mass or bush.—T.

**Death of Roses.**—Will you kindly tell me why Roses require such frequent renewal? The gardener says many of the kinds must be renewed every year. My soil is heavy, and such is called a good Rose soil.—S. H.

It is simply a vicious system that is to be avoided—that is, grafting all sorts of beautiful and tender Roses on standards of the Dog Rose, because it gives the nurseryman a better chance in a short time. Some kinds are so nearly of the same nature to the Dog Rose that they take on the stock, while others do not. You are suffering from what thousands of gardens in England are suffering from, blind faith in what the nurseryman does for you. The remedy is a different system. Try and get Roses—any Roses you like—on their own roots; and as the nurseryman seldom supply strong Roses in this way, a good plan is to get all the Roses “worked” quite low down so that the union of the stock and the graft is near the ground level, and is so protected, and the graft may even strike root. If you have to have delicate Roses, like some Teas, which do not in all cases on our cool country’s cold soil grow well on their own roots, then you may purchase them on the Dog Rose; but the union between the graft and the scion should be so placed that it may be covered by the earth, and in a complete sense protected against our ordinary frosts. In light soils, in which the Dog Rose does not thrive, Rose troubles will be often greater than those you describe, as on these we compel the Rose, however vigorous, to grow on a stock which only thrives on heavy soils. One evil result of the system in vogue is that all who have to do with the struggle suppose they cannot grow Roses and are obliged to the struggle.—Ed.

IN THE ROSE GARDEN.

NOTWITHSTANDING a lot of wet and rather rough weather the Rose garden is still one of the most beautiful outdoor features. I recently saw many splendid beds of Teas and Hybrid Teas that were one mass of blossom. The best were *G. G. Grand*, *Papa Gontier*, *Safrano*, *Mrs. W. J. R. Marie van Houtte*, *Souvenir de la Malmaison*, and *Marquis of Salisbury*. As a matter of course we do not get a quantity of good autumnal roses from full and double-flowered varieties; but such as those named above are perfect for the season when hot suns do not cause them to expand and even premature expansion. A few of the roses that are doing exceptionally well this autumn are *Marjorie*, *Mrs. W. C. Whitney*, *Charles*, *Maman Cochet*, *Edith Gifford*, *Jardins*, *General Jacqueminot*, *Princesse de Saxe*, and *Mrs. Ramsey*. The last-named is at its best in the autumn, being mildew-free, a very free bloomer, bright, but not so full as is desired by the exhibitor. It is a fine Rose for decoration. The new Tea *Empress of Russia* is also very good with me. The first week in July until the present time (October) my Roses have been in bloom. There has been a short and sharp spell of red rust, which has appeared almost as rapidly as it invariably

attacks during the seasons it appears. Insects and mildew were not quite so troublesome as usual, and the Rose season of 1897 has been one of more than average pleasure, although fewer grand flowers than is sometimes the case have been obtained.

The budded stocks look well, and I find fewer failures than usual. The growth of both Rose and stock has been vigorous without being coarse and rampant, and there is every appearance of the wood ripening well. Much work must be done soon. Summer pruning needs finishing, vigorous shoots secured, buds loosened, and the ground cleared and mulched. We must also decide soon if protection shall be afforded or not, and get the necessary material to hand, so avoiding any delay at the rush which always accompanies severe frost. Then we have Rose cuttings of partially ripened wood to insert, also those of such dwarf stocks as the *Manetti*, *De la Grifferaie* and *Brier*. These must be seen to at once if the best results are to be obtained. Pot Roses must be overhauled and some means taken to keep away superfluous wet. Plants may be lifted from the open and potted as soon as they exhibit signs of ripening; such will get a partial start before frost arrives, and this is a great help in the future, especially as a safeguard against the drying and shrivelling of wood from keen winds. The ground intended for new beds should be dug and manured now, so as to get a little settled before planting.

ORCHIDS.

ZYGOPETALUM MACKAYI.

THERE is a good deal of confusion respecting this species and *Zygopetalum intermedium*, but so little difference that one is often grown for the other. *Z. Mackayi* as known in gardens is a fine species, free blooming, easily cultivated, the blossoms long-lasting, sweetly scented and very handsome. It is always more satisfactory in large than small plants, as when the pseudo-bulbs attain their full size they produce immense spikes of flower. The delicate colouring on the lip contrasts well with the more neutral tints of brown and green upon the sepals and petals. The plants are usually most satisfactory in an intermediate temperature, but in this respect they are not fastidious. Bright sunlight is very injurious to the foliage, so the house in which they are grown must be somewhat closely shaded during the summer. Some very fine old plants in a neighbouring garden have been for many years grown in quite a dark old-fashioned house, principally occupied by Maiden-hair and other greenhouse Ferns—not an ideal place for either perhaps; still both get along well, the Orchids flowering freely every season. Wherever a nice growing temperature is kept up during the spring and summer and a winter temperature of about 50° maintained, this species will, if well treated in other ways, be generally satisfactory. The roots are large and fleshy, of a far more brittle nature than those of most Orchids; consequently a rough compost is needed, and one that will not too often require renewal. Being rather gross-feeding, the staple must be good, and there must be thickness enough to ensure a thorough roothold. There is no doubt that good loam fibre lasts a good deal longer in good condition in the moist heat of the Orchid house than does peat. It is also more holding, and though some species of Orchids will not thrive in it, this *Zygopetalum* will. Mix it in equal proportions with Sphagnum Moss and peat and add plenty of rough opening material, such as pottery ballast, crocks, or charcoal, and it will form an ideal compost for this Orchid. Large plants such as would fill pots each a foot or 18

inches across would require at least 6 inches of compost to grow them well, but smaller or badly rooted bits must have much less. A good deal of care is required in pulling about old plants, as, for reasons above mentioned, the roots are very easily damaged; yet some at least of the old material will be found to have got sour and close, and this must be got out. Sometimes they get bare of leads, and naturally of foliage in the centre, and the best thing to do in this case is to divide them into two or three, either remassing them or setting them going separately on their own account. Some of the older leafless pseudo-bulbs may be cut right away, but the less of this the better, always provided a well-furnished specimen is the result. Plants that have the compost silted away from about the roots may, if in good order below, have a little new material packed around the bases of the bulbs and made firm. The line of compost may finish a little above the rim in a convex mound. The young growth usually starts away some time during the summer months, the tips of the flower-spikes appearing in the young growths when a few inches high. From this time until the pseudo-bulbs are well made up an abundant supply of moisture will be necessary; in fact, few epiphytal kinds require a more regular supply the whole year through, and any slackness is usually followed by shrivelled bulbs and puny flower-spikes. The long, strap-shaped leaves of this plant have a very fine appearance when they are kept quite clean and free of insects. The worst trouble comes from red spider and scale, but neither of these need occasion any mischief if reasonable care is taken in sponging and the atmospheric conditions of the house kept right.

**Oncidium zebrinum.**—This I recently noted in good condition, the long branching spikes bearing a large number of the singularly striped flowers. It is not a difficult plant to cultivate, and thrives well on trellised blocks or in baskets suspended in a light, moderately cool house. During the time that growth is active a free supply of moisture to the roots is necessary, and this is as often as not for the greater part of the year. Even when at rest, enough moisture to keep the pseudo-bulbs plump should be given, any shrivelling being assuredly followed by weak, puny growths and flower-spikes. The compost may be of the usual description for this class of Orchid, and as it dislikes being pulled about, only a little of this should be allowed, a little fresh being added yearly about the time the spikes show just before the young bulbs begin to emit roots. The present is its usual flowering season, and it is a native of Venezuela.—R.

**Vanda cœrulea.**—Very beautiful just now are the blossoms of this favourite species, especially the deeply-tinted, broad-petalled forms. When really well grown this is one of the very best in the genus. It does not thrive in every place, but this is more often than not owing to the unnatural and needless amount of heat to which it is subjected. As a matter of fact, it is often exposed to frost in its native habitat, but, of course, no one would think of doing so under cultivation. In the lightest part of a house kept at an intermediate temperature, and especially if placed near a ventilator, it is usually satisfactory during the growing season, and while the plants are at rest a minimum of 50° is ample. Watering requires care, as the roots are easily damaged by too much moisture. Plants only semi-established are especially liable to injury from this. It does not require a great amount of root space, nice little specimens being grown in pots or baskets about 6 inches in diameter. Single-stemmed plants do well in the 4-inch size, with a little Sphagnum Moss and charcoal about the roots. *V. cœrulea* is a native of the Khasia Hills, where

it grows on the bare bark of the trees at an elevation of about 4000 feet.

**Lælia Dormaniana.**—This pretty species sometimes throws a second lot of flowers at this season, and their bright tints make them very acceptable just now. Usually about three blossoms occur on the spike, which rises from the top of the slender bulb. They are each  $3\frac{1}{2}$  inches across, the outer segments varying in colour, the brightest being almost entirely rose-purple, the lip brighter in colour with deep port-wine coloured veins. *L. Dormaniana* presents no especial difficulty to the cultivator, yet in only a very few places is it usually well grown. It is often placed in too large pots, and, because the roots fail to get a good hold of the compost, they are surfeited and yet starved. Some very fine examples I noted in the spring of this year were growing in small wooden baskets, these being suspended from the roof of a warm house, and the roots not kept unduly moist. The plants might be said to be squeezed into them, for there was hardly any space between the bases of the bulbs and the rods of the basket. The usual *Cattleya* house temperature and general treatment suit it well, and it flowers very freely in spring.

**Cattleya guttata.**—Several forms of this species are now blooming, better known than the type, perhaps, being the variety *Leopoldi*. This sends up a stout flower-spike with a dozen or more blossoms, and when these are of a good form they make a fine display. *C. guttata* is not a difficult plant to grow, requiring to be potted in fairly large pots in a rough open compost of peat and Moss. The growths start in early spring with the advancing light and rest during the winter months, and all such plants are much more easily kept in condition than those that grow while the days are short and dark. The variety mentioned above is apt to damp off when the young bulbs are about half formed, the mischief commencing in a discoloration of the sheath and spreading to the underlying tissues. Doubtless it is more due to external conditions than to constitution, and it is wise to be on the look-out that a low night temperature does not occur at the same time as undue moisture. The roots are strong and vigorous and are usually emitted when the young bulbs are forming, this being a good time to attend to repotting. Water must be very carefully applied afterwards and until the roots have regained their hold on the new compost. The plant is widely distributed in Brazil, the type having been introduced as far back as 1827.

#### DENDROBIUM CHRYSANTHUM.

Few Orchids in bloom just now are prettier than this species, provided it has been allowed to grow naturally over and around its basket or block. From a mistaken idea of smartness too many growers are in the habit of tying the stems up to stakes placed erect in the compost. This is bad enough if the stems are tied up as they grow, as it makes a stiff-looking plant of what may be a very beautiful one; but when the flowers are allowed to open and the stems tied up afterwards it is infinitely worse, as the blossoms lose all natural carriage and grace. Although *D. chrysanthum* is deciduous, it requires a rather different mode of treatment from that given to the usual deciduous species. It is not exactly constant in its flowering season, and, as a rule, begins to grow at the base soon after the flowers are past. As often as not this is in early winter, so to dry the plants off just then is obviously wrong. They should be kept as warm as possible and grown not far from the roof glass. The atmosphere must be kept moist, as if allowed to get dry the plants are perhaps checked when only half grown, the stems begin to harden, and a healthy, free growth is out of the question. If grown on strongly without any check the flowers usually appear while the leaves are still green and fresh, and naturally this adds to their appearance. The young shoots grow several inches in length before they commence to

root, and just when a thickening roundish process appears at the base is by far the safest time to repot or rebasket. Then the older roots have to a great extent fulfilled their functions and the plant is pushing out fresh ones to keep it going. Let these have nice clean new compost to run in and the plants will thrive the better for it. For this use peat and Sphagnum Moss in as rough a condition as possible, and mix these with plenty of broken charcoal and crocks to ensure aëration. Being a very vigorous rooting plant, the pots or baskets used may be fairly large. They must be well drained and clean, and over the crocks spread a layer of rough Moss. Finish the line of compost well above the rim and trim off neatly.

The only resting season *D. chrysanthum* takes seems to be just before the flower buds show at the nodes along the young growth. It seems to be one of those plants one can hardly grow too strongly, provided the growth is made in a good light and is in consequence ripened to a certain extent as it is produced. The stems vary from 2 feet to as many yards in length, the longer ones having a zigzag appearance when fully developed. The pretty golden yellow blossoms, with deep maroon eye-like blotches on the lip, are delicately scented and are produced in racemes of three or four all along the growths. Unfortunately, they last but a short time in good condition, seldom more than a fortnight. It is a native of Burmah and the lower Himalayan regions, whence it was sent home by Dr. Wallich in 1828, and it first flowered in England soon after at Chiswick.

#### ORCHIDS FOR AMATEURS.

I WRITE as an amateur, without any of the ordinary appliances for Orchid growing. I have no Orchid house—not even hot-water pipes—where I grow them, but an old-fashioned flue, which is no doubt a great hindrance in many ways to the proper supply of heat. Nevertheless, I grow Orchids and flower them with very great satisfaction to myself and to those to whom I am able to send flowers. There are certain Orchids which seem to adapt themselves especially to circumstances and surroundings altogether unusual for Orchids. My house is a good-sized vinery, with a pit in the middle, originally constructed for Pines. This pit is used for Chrysanthemums in autumn and during the Christmas season, so during that time the house is kept quite cool and airy, with only frost excluded during the months of October, November, and December; therefore the Orchids have to be removed into very close quarters in a small greenhouse, where they share their space with Primulas and Geraniums, and such other plants as are usually to be found in a house of that kind. This is the trying time, and I almost gave up in despair pulling *Cattleyas* and *Lælias* through such an ordeal. Of late years, however, I have been quite successful with this, and a foreman from a large Orchid nursery who has lately inspected my Orchids noticed what fine large sheaths were at the present time growing on the plants of *Cattleya Trianae*.

I have an idea that many Orchids are still nursed too much as a general rule. They do not get air enough, and the coddling does not suit them. A gardener who grows Orchids largely told me that it was quite useless to attempt keeping *Cattleya citrina* for any length of time, because it invariably went back with him from year to year. My experience is the exact reverse of this. The bulbs of this *Cattleya*, instead of growing smaller, actually increase in size, and they are always plump and healthy-looking. I attribute this to the bed of peat and moss to which I always fasten the bulbs when they arrive or want a new board. This is, I am sure, of the greatest importance. I often see *Cattleya citrina* growing on a naked board, but I have never seen it healthy under such conditions. It requires an immense amount of moisture, so that I consider the second necessity for the healthy cultivation of this beautiful Orchid is constant watering with tepid water all the year round. I never spare the

syringe with these plants. Then I never them much fire-heat. They are kept as cool as possible all through the winter, and in spring when they flower, it is specially necessary to keep the plants cool, or the buds quickly yellow and go off. I believe if these three things attended to there are few plants more easily grown than *C. citrina*, and certainly there are few things more deliciously fragrant when at the flowers are in perfection. I have heard of *C. citrina* being grown in a frame, and I can easily imagine that it would adapt itself to that treatment, and perhaps flourish even better in a house. With me it has to hang anywhere out of the sun, while Ferns and Palms and matoes and a great variety of other plants occupy the house.

Another Orchid with which I have been successful in the same house is *Zygopetalum Gautieri*. I have had this for some years, and usually flowers twice in the year. It is grown on the stem of a Tree Fern. At first I hurried up in order that it should take less room; but I found it hard to give sufficient moisture to the plant when growing in that way, so I stuck the end of the Fern stem into a pot of soil and set the earth very moist. This, of course, helps to promote moisture throughout the whole plant, and my *Zygopetalum* immediately began to grow; that it approved of the treatment. One difficulty in flowering this plant on the Fern stem is that it speedily arrives at the top, and then the roots are in the air. I proposed to an Orchid grower who was looking at the plant to turn it upside down and so let the *Zygopetalum* creep up the stem again. But he would not hear of it. He said: "The plant is a wonderful success; you have had it so long. I would not meddle with it." I was strongly inclined to turn it upside down, nevertheless, for otherwise I do not see how it could grow on well from lack of moisture.

*Odontoglossum Harryanum* is now in flower, and truly beautiful it is. This plant has no more trouble than other *Odontoglossums* in a mixed house. The trial is with *Cattleyas* and *Lælias*, which have to be very carefully watched to see that they do not suffer from cold. It is they like a rapid advance of heat in January when the vinery is started. *Dendrobium* flourish remarkably well. I put them out of doors in July and August, and that seems to strengthen them and give them great vigour. *Dendrobium* floriferum seems to depend on such thorough ringing in an autumnal sun for maturing its blossoms. This is a fine Orchid when it is covered with Horse Chestnut-like flowers, but it lasts a very short time—a defect unusual in the Orchid tribe. *D. infundibulum* and *D. suavisimum* also do well under this rough treatment, but I have not succeeded so well with *D. Jamesianum*; it seems to me more crotchety. *Vanda corulea* grows vigorously and seems to enjoy its treatment, putting forth its large fleshy roots as the plant gets gradually higher. I give it nothing to grow in except Moss. In this it seems to thrive.

If Orchids can be grown successfully in any way—and I have not, of course, mentioned all the varieties in my house—who that has a greenhouse need fear attempting to grow this beautiful and interesting tribe of plants? It seems to me that no conditions could be more unlike the ordinary surroundings of Orchids than those in which the plants are grown.

#### A GLOUCESTERSHIRE PARSON.

**Palumbinum candidum.**—This is a delicate and pretty little plant not so often seen as it deserves. The habit is tufted and the flower-spikes occur in the centre of the young growths. The individual flowers are about  $1\frac{1}{2}$  inches across, nearly pure white, only a slight tinge of purple being present. It does well in the cool house and from the time growth starts in the spring until the flowers are past the roots must be kept very moist. During the winter less moisture suffices, but no dry rest is necessary.

GRASS WALKS.

The grass walk in the illustration is one of the most attractive features in the picturesque garden of which it forms a part. There is a very small portion of the year in which it is not more or less gay with flowers, mostly old favourites, though some newer and rarer kinds are from time to time added. In the spring it is a brilliant sight with Oriental Poppies, large Scillas, white and coloured Pinks, great clumps of Irises of all colours, perennial Lilies, Tufted Pansies, &c., soon to be followed by Delphiniums, Daisies of various colours, Pyrethrums, and other things too numerous to name. One great feature is the Yews and ornamental Hollies, which are planted at intervals and make a pleasing contrast to the flowering plants. Just at the moment while Dahlias, Asters, &c., make the walk gay, the fruit trees are heavy with

spaces; to its shady retreats, where the Ferns grow high; to the Vine-covered pergolas, whose leafy covering scarcely suffices, thus early in the summer, to exclude altogether the sunbeams, which daily find the interstices of the canopy becoming less in size and fewer in number, and to the green grass walks with their charming vistas, their flowering plants, some tall, some lowly, on either side, and the sense of the nearness of Nature that encompasses them. In the accompanying illustration we have a happy representation of one of the latter. At the back of the border the tall, light blue Delphiniums stand with the Madonna Lilies, whose first pure chalicees are as yet unopened. *Spiraea Aruncus* has perfected its feathery inflorescence, the Campanula bells show white, clearly defined, against a dark evergreen background, and the Pansies bloom above the grassy verge, while cluster Roses

preferable, with its breadths of hardy flowers, that from spring to autumn succeed each other in brightening the confines of the green way, to the level brilliancies of the bedding plants that ostentatiously display their massed colours from quaint plots in the full sunshine that falls upon the shadeless lawn.—S. W. F.

FLOWER GARDEN.

LOBELIA CARDINALIS.

This bright red Lobelia and its many varieties are among the most beautiful of herbaceous perennials now in flower. The bright blossoms on the long erect stems are fine at midday when the sun shines on them, while the morning dews give it an even greater beauty, the blossoms looking as though they were crystallised. The plant is not supposed to be strictly hardy, but it has stood the past three winters here in various positions, and also in neighbouring gardens, without the least protection of any sort. It requires good cultivation, and few repay it better. The site chosen for a group of plants ought to be taken out to the depth of a foot or more, according to its staple, and plenty of half-decayed manure laid in the bottom and mixed with the upper spit. If planting is done in spring the soil should be made very firm, the plants well watered home, and covered with a mulch of short material. Being kept moist by these means the growth will be vigorous the first season, and the plants will get thoroughly established before winter, and such plants rarely take much harm from frost. There are certain positions, perhaps, where *L. cardinalis* will not stand the winter, but they are fewer than is generally supposed, badly rooted and weak plants often succumbing where well established clumps would come through all right. It is worth while to give it a little extra care the first season and see what effect this has upon its hardiness. The usual method of propagation is by division of the roots, but, as is well known, the roots often die back considerably even without being cut when the plant is lifted for the winter. Seedlings of most of the varieties, or at least 90 per cent. of them, may be depended upon to come true. The seeds should be sown in fine, well-prepared soil in boxes or pans, these being placed in a gentle moist heat until the plants are well up. They may then be kept slightly cooler for a time, and as soon as large enough pricked out singly about 4 inches apart into cold frames. If the seed is sown about midsummer, the plants will be large enough to partly show their herbaceous character the first winter, and they should be left in the frame until spring and then planted as described. Plants raised earlier in the year may, of course, be planted out during the summer, and a large percentage of these will flower the first season, but for reasons indicated above I prefer the later-raised plants. The fine-foliaged variety Queen Victoria nearly always comes true from seed, but the paler-leaved forms usually show more variation. Cuttings of the young shoots may also be taken, and will form flowering plants the first year, either of these methods being more satisfactory than division of the roots. For late summer and autumn decoration *L. cardinalis* is very beautiful. Single plants may be grown in 6-inch pots, or larger ones may be used for grouping several plants in. They come in very useful at a time when the summer-flowering Begonias and others are getting past their best, and look exceedingly well grouped in company with double white Petunias or



A grass walk in Fairfield Gardens. From a photograph sent by Mrs. Deane.

Apples and Pears. There is nothing in a more satisfactory than a good herbaceous border, but, like everything else, a good judgment is required to ensure a successful and properly supporting rampant growers smart in itself.—D.  
—Fortunate are those whose gardens, with smooth drives and well-kept gravel paths, contain grass walks, for these, edged with various groups of hardy flowers, are a delight to the artistic eye. The green sward has on summer days a pleasant feeling of elasticity to the foot which gravel lacks. True it is that in wet weather the latter forms the best ground for walking upon, but during the long days, ere the year has reached its meridian, it is irresistibly drawn to the garden; to its corners rather than its more open

hang from the trellised arch. On either side foliage of many-tinted green rises aloft, fit harbour for the feathered songsters that make the morns and eves of early summer musical with their notes, and beyond the tree bole, that stands out at the end of the walk, a glimpse of the level lawn appears. Varied are the plants that add by their colours to the beauty of these grass walks; here Irises, purple, white, saffron, and lavender, interspersed with the apricot of *Papaver pilosum*; here the gorgeous Oriental Poppy, with its flaming vermilion; here pale pink and white Paeonies; and here, again, Lilies, white, scarlet, and orange.

Year by year, with but a little attention in cutting away an encroaching bough or adding a few plants here and there, the grass walk remains a delight, and to the lover of Nature, far

similarly habited plants. They are little trouble to grow, the crowns being potted up in spring, plunged outside in plant protectors in ashes or similar material until the stems are lengthening for flower, when they may go inside. Good rich soil must be allowed, and after the plants take on their second growth occasional soakings of liquid manure are beneficial. R.

**Crocus speciosus.**—This beautiful species, to my mind the very finest of the autumn-flowering Crocuses, is already in bloom from bulbs which have remained in the ground undisturbed for several years past, and the blossoms appear to be finer than ever. I have patches next to the Box edging of a border, and also under a west wall. The former, by reason of being in a warm and sunny position facing south, are always the first to bloom; in a north border, which the sun does not reach, the flowers come much later. The peculiarity of flowering successively is a good one; and the blooms are so beautiful that one can wish for them to be preserved as long as possible. Beautiful as this Crocus is, it is rarely seen, and yet if once seen its beauty must of necessity create a desire to possess and grow it.—R. D.

**Carnation Uriah Pike.**—In a recent issue of THE GARDEN one writer stated that Uriah Pike Carnation was of little value in the outdoor garden. When I was at the Carnation show at Birmingham my attention was called to a mass of Uriah Pike by the side of one of the main walks. Here it had grown vigorously and was blooming profusely, throwing large, full, and rich dark blossoms of fine quality, and if anything more free in producing its flowers than in the case of plants grown in pots. The plants were about 3½ feet in height, and the numerous flowers were admirably displayed. It was a model Carnation bed, and all the lovers of the flower present at the Midland Carnation show were invited to see it and were greatly delighted. Uriah Pike was quite at home here. Mr. Latham, the curator of the Botanic Gardens, grows Carnations largely for house decoration, and especially Uriah Pike and Germania, and no doubt he puts out in the open strong, vigorous plants, and they made the very fine and effective display to which allusion has been made.—R. D.

**Colchicums.**—In the short note on these on page 196, through some error I appear to say that the blooms of *C. autumnale* and those of some of the other Meadow Saffrons look magnificent in size beside those of *C. Bornmulleri* and a few others referred to by name. The word magnificent should have been insignificant. *C. Bornmulleri* is the largest of all the Colchicums with which I am acquainted, and a clump of it at the base of the rock garden here is very effective at the present time. On their first appearance above the soil the flowers are ivory-white. The outside of the outer segments is afterwards flushed with rosy purple, which extends in a few days until the outside of the flower is entirely coloured. The interior is of the same rosy-purple hue, but has a very broad white zone at the base. According to the Kew Hand-List of Herbaceous Plants, *C. Bornmulleri* comes from Asia Minor, Haussknecht being the authority for the specific name. It is not included in Mr. J. G. Baker's Synopsis of Colchicaceae in the Journal of the Linnean Society, vol. xvii., No. 103.—S. ARNOTT, *Carsathornie, Dumfries, N.B.*

**American Carnations.**—In THE GARDEN of August 21 (p. 147) Mr. H. W. Weguelin remarks, concerning American Carnations, "They all have papery petals, with the roughest possible edges." As a class for winter blooming, American Carnations are a long way ahead of the similar class grown in Europe, and I have often thought that they might be profitably grown in England somewhat on the American plan by selecting a locality that enjoys more than the average amount of winter sunshine—Torquay, for instance. What Mr. Weguelin means by "papery" petals I fail to

understand, unless he infers lack of substance, in which case his remark is not just, for in form, fulness, and substance the flowers will stand comparison with the best. But the "saw-edged" petal, I know, is the bugbear and the ground of offence to Mr. Weguelin and others. Why should we be forced to accept the florist's flower as the only true type while there is another form more natural, and withal possessed of rich fragrance? Mr. Weguelin talks about a winter Carnation show. If he will walk along the principal streets of any large American city on any day from early October till June he will see more Carnations every day than ever were on exhibition at one time at an English show, flowers of bright self colours, perfect in calyx, with strong self-supporting stems up to 2 feet in length. The Carnation here is a winter flower of the masses, but the extent of its culture and the number daily disposed of must be seen to be believed. The best American Carnations are certainly up to the standard of the best English varieties in every respect, their sole difference being in that form of petal which relieves the flower of formality and adds to it more beauty. If they are unacceptable to a limited few, it can only be because they are "saw-edged," as there is no other real or reasonable cause for "discarding" them, whilst one can but smile at the verdict of such judges as would pass them over, all other points being equal, because they happen to possess a characteristic trait of their original parent.—A. HERRINGTON, *Madison, N.J.*

#### FLOWER GARDEN NOTES.

**PYRETHRUMS.**—If an early display as well as an increased stock of Pyrethrums is required autumn division is desirable, especially if the coming spring, as in several past seasons, prove hot and dry. The clumps need not be split up any more than is absolutely necessary, a safe rule being to practise division, so as to avoid mutilation as much as possible. A deep, fairly holding soil is the best for Pyrethrums. If naturally on the light side, a liberal dressing of cow manure should be worked in. The plants are very sensitive to a prolonged spell of dry weather, and, so far as my soil is concerned, I find autumn planting, liberal treatment, and heavy surface mulching indispensable to successful culture. Given the two last-named points, the plants may remain in the same position for three seasons, but at the expiration of that time the crowns are pushed up a considerable way above the surface, and when these conditions are apparent they should be lifted and replanted. They are among the hardy perennials that may safely be recommended for permanent beds, for only for a very brief season are they without a fair display of foliage, and any rusty look about them, sometimes in evidence after the first flowering, can be quickly remedied by a bit of good manure on the surface and a thorough soaking, preferably with liquid manure. Perhaps some reader who grows largely will advise as to the best and most economical way of staking. It is one of the most awkward plants we have from this point of view, that is, to stake so that the blooms shall be well seen and the flower-stems fairly straight without undue formality, and with due regard to the amount of time expended in the operation. I mean, of course, where there is a mass of flowers together, small single plants throwing some two or three flowers each are easily dealt with. I notice a rather sharply defined liking as to the single and double types. Personally, I think both are beautiful, and there is hardly any difference in their duration either on the border or in vases. Good singles noted last year were Beatrice Keilway, Lorna Doone, Mr. Santley, Mrs. Bruce Findlay, Princess Charlotte and Empress of India; the two last-named, respectively first-class in the crimsons and whites, being exceptionally good for cutting. Among the older kinds, Tempête is welcome for its very finely-cut foliage. Half a dozen good doubles in different shades are Aphrodite, Solfaterre, Florentine, Celia, Ormonde, Mebon and Pericles.

**PROPAGATION OF HARDY PLANTS.**—Besides propagation by division, commencing with Pyrethrums, and continued right down through the various subjects until the flowers of the last Starworts are over and one is able to deal with them a considerable amount of stock can be secured from cuttings, that is, unless an equally good result is obtainable from early spring sowings, which it hardly seems desirable to resort to the cutting. The best strains of Phlox, Pentstemon and Antirrhinum can, however, be perpetuated in the latter way. With the decline of flower and foliage forms of herbaceous Lobelias can be divided and replanted; that is if it has been decided where sites they are to occupy in the coming year. A hard-and-fast line can be laid down as to the division and replanting of the many forms of Starflowers and Starworts. Some varieties may remain in the same position for years retaining splendid vigour, whilst others are seen to the advantage with annual, or, at most, biennial division.

**DAFFODILS.**—I should like to remind readers who are commencing the culture of Daffodils one or two important points essential alike for good and a long-sustained display the first season, and for after results. Firstly, that September or, at latest, the early part of October, is the time to plant, and that, given a rather light soil the bulbs should be inserted deeply. Secondly, that a careful selection is necessary to ensure a long display with no intermediate break. Thirdly, does not, as a rule, receive the consideration it deserves, but is a very important point when one remembers that the season extends from the end of January until the middle of May. Thirdly, the planter should make sure where he wants his different varieties, for once planted the bulbs should not be disturbed, that is, unless he is prepared to go to the trouble of early annual lifting, selection of best bulbs, close planting, and the necessary preparation of soil. The ordinary private grower whose chief aim is a big display of flowers rather than the increase of stock, will find the unturbed bulbs increase in strength with each succeeding year until the solitary bulb becomes a fair-sized clump yielding from twelve to eight bulbs.

**VIOLETS.**—We are getting nice outdoor plantings now from Amiral Avellan and Wellsiana, the former one of the big types, a large flower with stalk from 10 inches to 12 inches in length, yielding only a faint perfume, for which reason, despite its size, I shall have no more to do with it after the present season. Unless the unusually long stalks are deemed essential, it is doubtful if one can have a better single Violet than Wellsiana, flowers of a good colour, freely produced, and very strongly scented. The offering of Marie Louise for transfer to pits has been performed this week, and I do not remember a better lot of stuff, the plants large and vigorous, bristling with buds, and, best of all, free from spider. Few plantings have been made in for years without the preliminary dipping.

*Clairmont.*

E. BURRELL

**Sweet Williams which have flowered.** Any particularly fine varieties of these which have bloomed in the summer, and were marked on account of their fine properties, may during the present month be lifted, divided, and replanted. In dividing it will be found that most of the shoots which are thrown out from the roots at soil level will have small root fibres attached to them, and if they are planted out with some sandy soil at their bases they will soon root. This care is only necessary in the case of very fine and extra marked varieties, as seedlings from fine strains, such as the marked plants alluded to above, are certain to produce the best for the purpose. Seeds may be sown as soon as ripe, which is a matter in the matter of time, or in the spring. I prefer to sow thinly in shallow boxes, placing them in a cold frame, where they soon germinate, keeping the boxes in the frame all the winter when the seeds are sown in the autumn, in the spring placing them in the open as soon as

young plants have formed their second leaves, and taking care they do not suffer from want of water. They can be planted out to flower as opportunity offers.—R. DEAN.

GLADIOLUS TRISTIS.

The *Gladiolus* figured is a quaint and somewhat uncommon species, sent to me two years ago as the Night Scented *Gladiolus*. The name



*Gladiolus tristis*. From a photograph sent by Mr. Greenwood Pin, Dublin.

very suitable, as towards evening it exhales a perfume somewhat resembling that of the Night Scented Stock (*Matthiola*), while by day it has scarcely any smell. The colour is peculiar—a kind of lemon-buff, with dottings and pencillings of black; not strikingly pretty, but pleasing to such as like quiet colours. As noted in THE GARDEN (vol. xlix., p. 416), it has exceedingly curious leaves. These are for the greater part of their length apparently square, as occurs in *Iris tuberosa*, &c., but on cutting across the section is seen to be an almost perfect Maltese cross—a form of leaf met with in no other plant with which I am acquainted. It grows freely in ordinary garden soil, and in general style resembles *G. Colvillei* rather than the autumn-flowering section.

GREENWOOD PIN.

*Campanula isophylla*.—Is this species to be planted? The white variety is abundant, for almost everyone who grows plants owns it. But the blue, does it exist? I have had two blue forms sent me as *C. isophylla*, but they are not like the white variety in the shape and size of the leaf. Their leaves are broader and more rounded, more rounded, dark green, as opposed to the grey-green of the white, and on much longer foot-stems. I take one to be *C. fragilis* and the other *C. Barrelieri*, which is probably but a variety of the other. Neither of the blue-flowered types occurs near the white one for freedom and density of growth or profusion of bloom. I shall be glad if anyone can inform me if the true *C. isophylla* exists, and if it is obtainable. What comes nearest to the white is the green-leaved hybrid

obtained, it is said, from a cross between *C. fragilis* and *C. isophylla alba*, and from which the beautiful variegated form known as *C. Balciniiana* sprang. This is a free grower, singularly profuse of bloom, the pendulous shoots furnishing quite a cataract of blossom, as in the case of *C. isophylla alba*. My plant of the cross came beautifully variegated at the points in early summer, but not altogether variegated, as in the case of the new *C. Balciniiana*.—R. D.

PLANTING CARNATIONS.

IN answer to the query (GARDEN, September 18, p. 232), Carnations may be planted in September or early in October, always provided the layers are well rooted. If this is not the case they should remain on the parent plants until the spring. Under no circumstances would I advise "T. S." to pot up his layers and keep them under cover during the winter. The operation is quite needless. It seems a pity the idea still prevails that winter protection is necessary for Carnations. As a matter of fact they are among the hardiest of plants, and in the exceptionally severe winter some two or three seasons back, when the glass dropped to zero and the frost was very protracted as well as severe, the loss was very trifling. As mentioned above, it is emphatically a question of well-rooted plants, and this being so, an important factor in Carnation culture is early and careful layering, and close attention to the layers to see they do not suffer from want of water. Granted, however, all this, there are some varieties that root much more slowly than others, and with, for instance, Countess of Paris and Ketton Rose I have always had the best results from deferring the planting until the spring. The question of careful consideration as to the proper time for planting is applicable to many hardy things besides Carnations, and will depend, as with them, on the time of striking and the amount of roots made. Early struck Pinks, for instance, can be planted at any time, but tufted Pansies, if not inserted until September, will be just as well on the propagating border until early in spring. So, too, with any seedlings of hardy plants that have been obtained by autumn sowing. Although there may be no possible question as to their hardiness, it is hardly advisable to put them out as very small stuff on the open border. The better way is to prick them off in some enclosed space where they are likely to be under fairly constant supervision, and where measures can be taken to accelerate growth and to keep off any enemies.—E. BURRELL.

—A reader has lately asked whether he might safely plant layered Carnations in September, or had better put them into small pots and plant them out in spring. More Carnations are planted during September than at any other time, but the sooner in the month the work is done the better. Much, however, depends upon circumstances—how the layers are rooted, what kind of soil they are to be planted in, and what the situation is. Layering is often postponed till too late in the season for fear of spoiling the beauty of the plants; consequently should a wet, cold time follow the operation, roots are formed but slowly and transplanting cannot be done till October. I have seen plants do very well transplanted the first week in that month where the soil was warm and well drained, and fine weather followed till the end of the month, but, as a rule, those who have a strong retentive soil to deal with run a great risk by planting in October. The young plants, if not too numerous, had far better be put into as small pots as will hold them and be placed in cold frames or pits, being all the better if plunged in ashes and transplanted to the open border in April. Last autumn I saw a number of Carnations being planted in a private garden in October, the young plants being small and indifferently rooted, and the soil, moreover, cold and stiff. I am sure that if I could have seen the plants this summer they were a poor lot, but many are slow to learn that a little extra care and trouble at the outset often save loss and dis-

appointment in the end. Had the plants above referred to been not even potted, but merely planted closely together in frames, they would have stood the winter well, have increased the number of their roots, and have, after removal to open quarters in April, made good headway and bloomed fairly well. In cold gardens, a spit of the border or bed should be taken out and replaced with a light loamy compost; this gives the roots a chance.—J. CRAWFORD.

—"T. S." inquires (p. 232) as to the wisdom of planting these now in the open or potting them. Had your correspondent given particulars of locality and the kind of soil he has to deal with, a more definite answer could have been given. In the absence of these important details, perhaps the following may be helpful. I would unhesitatingly plant out freshly-rooted layers in any fairly light, well-drained soil, and provided also the locality is not troubled with rabbits in winter. Where there is a danger from rabbits, or again, where the soil is retentive or cold and badly drained, the Carnations will be best in quite cold and well aired frames till early in March. If possible at planting time, use a good handful or two of fresh loam and bone-meal about the roots, plant firmly, without burying any of the side shoots and avoid too much gross manure in the soil. If planted in autumn the plants should be gone over after severe frost is past, and see that all are firm in their respective positions. Many things besides Carnations are lost or injured through neglect of this very simple matter. If the Carnations are potted for the winter, give pots of fair size, at least 4½ inches in diameter, or, better still, where a shallow frame is at hand, plant all layers in this till March in a good mixture of soil, at which time they may be given their permanent positions in the garden. Lifted in this way with good balls of earth and the roots virtually intact, a good bloom may be expected. Autumn-planted Carnations are benefited by frequently stirring the soil during winter.—E. J.

PROTECTING IRISES FROM WATER RATS.

As I know many people find great difficulty in protecting their Japanese Irises from water rats, I send a photo of how I have here completely



Mode of protecting Japanese Irises. From a photograph sent by Mr. Geo. Dixon, Astle Hall, Chelford, Cheshire.

defeated them. Last year all my beautiful blooms were nipped off just as the buds were bursting, and I could not stop the rats, trap and shoot them as much as I would.

The accompanying illustration will describe better than words how the rats are kept out. I grew the Irises in clumps in the water at the edge of my lake, where they do very well, better than on land, although in a wet place. Although there is a little expense attached to this

method, the flowers are so beautiful that I consider one is well rewarded for the expense.

GEORGE DIXON.

*Astle Hall, Chelford, Cheshire.*

### THE HOLLYHOCK.

THERE appears to be the promise of a revival in the Hollyhock. It does appear that the dread disease which caused such havoc among the Hollyhocks for a long time is less hurtful than it was a few years ago, and perhaps it may yet depart as mysteriously as it came. Very few of the remedies recommended to cure the disease were of much avail; there were times when its virulence appeared to defy, and that successfully, any efforts to stay its progress.

Those who contemplate planting, especially in cold and damp localities, will do well to obtain plants in pots at this time of the year and onwards and winter them in a cold frame previous to planting out in the spring. There is scarcely any soil and situation in which the Hollyhock will not grow. I have seen it doing finely in the midst of somewhat thickly planted shrubs and at the backs of flower borders, in odd corners in the semi-wild garden, in the sun or in the shade.

To do well, the plants should be in a good garden soil trenched to the depth of 1½ feet, and into which has been worked some well-rotted manure. Then planting can be done early in November if it be done in the autumn, placing the plants a yard apart, so that they may have room in which to develop. A plantation of Hollyhocks with dwarfier things fringing it, such as Phloxes, Pentstemons, Gladioli, Hyacinthus candicans, the dwarf growing forms of Chrysanthemum maximum, and such like, would all be appropriate. Spring planting out of pots may be done at any time up to the middle of May. The Hollyhock is often slow to start into growth, but once it becomes vigorous it rapidly makes headway.

Mulching with good manure, watering when necessary, and then copiously, and staking as the plants gain in height, are all necessary summer details having much to do with the well-being of the plants. Staking is very important, as rough winds may snap off an ascending shoot, and then it is of no value for decoration. Good culture is the best antidote to the disease, and by such means a good deal of its virulence may be prevented.

R. D.

**Pyrethrum (or Chrysanthemum) uliginosum.**—I have found it quite easy to propagate this fine autumn-flowering Daisy by taking off tops 6 inches long just as the crowns of terminal shoots are forming, rooting them under glass, and thus have pretty and free-flowering plants to bloom in pots at some 20 inches in height in the autumn. Even by layering I have obtained the same results, as, although the stems are pipy, yet when layered and notched slightly roots are soon emitted. That plan, however, is much more troublesome than is the rooting of tops as cuttings. This plant, like so many more of the herbaceous hardy flowers, increases in height each year if left in the same ground undivided, because of the struggle of the shoots or stems to obtain as much light and air as possible.—A. D.

**Tropical Nymphæas in the open air.**—In the garden at Sandhurst Lodge, near Wokingham, adjoining one of the warm houses, a tank was made some two years ago. It is against a south wall, and so placed that a small pipe is taken from the pipes in the house through the wall into the tank to warm the water. In this are growing plants of *Nymphaea cyanea*, *Nymphaea Devonensis*, and *Nymphaea scutifolia*. They are thriving grandly. There were as many as eight to thirteen blooms open in one day on *N. Devonensis*. This is sufficient to show that it will thrive satisfactorily in the open air if the water is kept warm. The plants also stood in the open all last winter. From the success that has attended

the first trial, it has been decided to enlarge the tank and plant out other tropical kinds.—J. CROOK.

**Some native flowers in the autumn garden.**—If our September weather were always fair, garden flowers would be very happy; but with the sudden rains and storms that often come to us at this time of the year, bedding and other tender plants, and even hardy exotics, are saddened very soon by it. Then it is pleasant to see how some native plants are refreshed rather than disheartened by the rains and come into welcome bloom. In many country places where there is room enough these take care of themselves; for instance, the Harebell and the purple Vetch (*V. Cracca*) add much to the beauty of the autumn and late summer, and are often seen. So, too, the Heather is common in places and very pretty, but in others it is worth while taking a little care to get the less common kinds. For instance, although the Heather may be very common, and its fine varieties may be planted, the less known Heaths, such as the Cornish Heath (*E. vagans*) and Dorset Heath (*E. ciliata*), may be planted in rough places, and no plants are more deserving of it. The little Furze, too, which is so abundant in many upland wastes, is, we find, a very pretty plant, if not in the garden, not very far from it, helping to form foregrounds to drives, and in low coverts just at this time blooming very cheerfully and freely while other things are beginning to fade. As we write it is quite full of beautiful fresh blooms. It is easily raised from seed like the common Furze. Forget-me-not is still very fine by water, and where the soil is rich and deep the effect in broad fringes is very pretty, though its best time is the summer. The berries of the wild Roses begin to colour, and the various Blackberries also add to the beauty of the coverts and hedgerows. By the waterside, one of the handsomest bushes we have, the Water Elder, begins at this time to show the fine colour of its fruit, and the Orpine on banks and the Golden Rods in the coverts also make a show.—*Fidd.*

### NEW DAHLIAS.

WRITING on new Dahlias in last week's GARDEN, "S." remarks that the tendency is to grant certificates to varieties of too much the same tint of colour, and singles out the varieties Falka and Regulus as being too much like Cycle and C. Woodbridge. As grown and seen here in the open air, all four are very distinct from each other, and I forward you blooms of each for inspection. At the two exhibitions "S." refers to the new seedlings are carefully examined by a committee of Dahlia experts, men having a thorough knowledge of their work and of existing varieties, and when an award is made to a new seedling by such a body of men, it may, I think, be taken as correct that the variety has some merit of distinctness or shape beyond varieties already in commerce.

The same writer, commenting on the variety Fantasy sent out last spring, says it is a complete failure as a plant, that its flowers are tiny, and that the footstalks are so short that the flowers are hidden in the leaves. I send you half a dozen blooms of this, cut from a plant carrying at the present moment about four dozen blooms. You will see from the blooms sent that they have an average length of about 6 inches of clear stem from the bloom to where the two side flower-buds have been nipped off, and a length of about 11 inches to the point where they have been cut, just above where the topmost laterals are formed. This variety was sent out not so much as an exhibition or garden variety but as one specially suited for supplying abundance of small or medium-sized flowers for cutting of an elegant and new shape in Dahlias, and as such I believe it has given much satisfaction. With a little

judicious thinning of the branches and buds necessary for the Cactus varieties generally, it can be made an effective garden plant: in habit of growth it is equal to at least four-fifths of the varieties classed as true Cactus Dahlias.

I fear too many people who plant Cactus Dahlias neglect the little necessary thinning out of the branches requisite to make them effective garden plants. Out of about three dozen varieties grown here, Matchless, Beatrice, and Regulus throw their flowers above the foliage best, the stems of these being both long and stiff; but this is not always an advantage, as after a storm of wind and rain these cut a sorry appearance compared with a variety like Bertha Mawley, which throws its flowers close to, but just above the foliage. Many others have stems equally as long as those named, but are not so erect, causing the flowers to hang more or less among the foliage, but varieties of this description with a little thinning of the top laterals become most effective garden plants, as instance the variety Starfish, perhaps the most beautiful Dahlia ever sent out.

Cambridge.

J. BURRELL.

### ASTER TRIALS AT MORTLAKE.

IN the 310 varieties of Asters now being grown for trial by Messrs. Carter and Co. in their grounds at Mortlake there must of necessity be some duplicates and others too closely akin to be distinct yet on the whole the trial is a remarkable one, the varieties ranging from 3 inches high to nearly or quite 2 feet in the tallest kinds. No effort is made in these trials to produce prize flowers but with good culture all round to test the natural habit and relative value of each kind side by side. No excessive manuring or rigid disbudding to produce flowers of special quality is indulged in, with the result that these trials become a standard of reference and afford the most reliable information it is possible to obtain.

There are some dozen or eighteen types of Asters here besides others not yet sufficient fixed, but which will prove acquisitions well deemed reliable. In one instance some half-dozen years had been spent in growing, selecting and forth with a fixed ideal in view, but which is very slow in being realised. Particularly attractive is the Porcupine strain, with pointed quill-like petals, that resolve into a more or less Thistle-like head. Here, as in other classes, there is much variety, while the more brilliant shades are very charming. The Cockade or Crown Aster is very distinct and usually of two colour an outer whorl of a deep hue with a central crown of white; these attain 1½ feet high. The strains of the Peony-flowered, as also the Chrysanthemum and Victoria, are alike meritorious. A similar remark applies to the Comet Aster, which all in all is perhaps the most elegant of the family. Other noteworthy types are Queen of the Market Dwarf Bedding and Dwarf Bouquet. The Emperor type is readily distinguished by its producing one magnificent flower of fine proportion at the summit of a sturdy stem 15 inches high a grand exhibition kind, or for growing singly in pots. Some Swiss novelties were very striking and in addition to the primary features of the Comet group these possess a whorl of leaf bracts that materially adds to their beauty when cut. The Giant Branching is all the name implies—a strain at once remarkable for its vigour as also its great abundance of large handsome blossoms on branches nearly 12 inches long. The new yellow Aster is a light tone of yellow, pleasing in its shade and very distinct, and while as young in its infancy, will doubtless prove the forerunner of deep shades of yellow and improved forms. White Plume is the finest of all the pure white and the flowers of remarkable purity and finely built and one that by special culture might easily be mistaken for a pure white Japanese Chrysanthemum, so exactly do the overlapping petals convey the

dea. The plant is vigorous and reaches about 15 inches in height. The endless shades of colour it is impossible to depict in words, but the rose and pink shades are lovely in many instances, and restful, too, amid the fiery shades of scarlet and the richest of purple and blue, the more so when to large a space is devoted to the flower, as here obtains. E. J.

**Physalis Franchetti.**—Some beds of this are very striking and conspicuous at Kew just now. The plants have made good growth and are carrying plenty of healthy leaves, also a full crop of fruit. The growths have been tied up to light stakes, which are well hidden, and the immense calyces are thus better exposed to view than they would be if the plants were allowed to assume their natural habit. The calyces are well coloured and impart quite an unusual glow to the beds when seen from a distance. The plant will scarcely do for beds which are required to look right during summer, but it is well suited for rowing in less prominent positions or in corners where it can get ample sunlight and a rich soil.—T.

—Reference has been made to this several times lately, and certainly, where dried flowers and grasses are appreciated in winter for drawing-room decoration, they come in most useful. There are one or two points in its culture that need special attention if well-furnished stems and old, fully developed, and highly coloured pods are to be had. To grow them crowded is to court failure, as not only do the growths become stunted and weakly, but the flowers are few and far between. Moreover, if September and October should turn out wet, many of the calyces will rot. What is required is to thin out the growths early in spring so that plenty of sun and air can reach them, and to support them, when some inches or 12 inches high, with neat sprigs. The pods that are cut from Pea sticks are good for the purpose. The orange-coloured calyces look well mixed with Honesty, and placed in large vases or ornamental bowls.—J. C.

**Delphinium nudicaule.**—This attractive and dwarf-growing Delphinium is now flowering with ease, the plants raised from seeds sown in April, seems, therefore, that this species of Delphinium, in common with some other perennials, can be carefully treated to be made into an annual if it is early and proper treatment as soon as the seedlings are large enough to handle; say, potting each singly as soon as large enough, and growing on into size in a cold frame previous to planting in prepared ground. It should be a raised pot on which this Delphinium is planted, and when it becomes perennial, a little care being necessary to keep the roots well covered with soil during the summer. When planted in damp, low ground the roots are apt to perish. It is well deserving of culture on account of its colour.—J. D.

**Bouvardias in the open.**—A really good way of employing the large, ungainly plants is to plant them in the mixed border in spring and allow them to grow and flower at will. That large-flowered variety, *B. corymbiflora* Humboldtii, is especially good for this work, as by placing three plants in a group and allowing them to flower at will, quite a beautiful lot of blossoms will result. Plants a year old that flowered in pots the winter previous are the best for this purpose, these being cut back or pruned in March and planted out at the end of May. By starting the plants in frames in good soil, such may be duly hardened and transferred to the border with good results. No pinching will be needed after the plants are pruned in March, the object being to have as much bloom as possible during summer and early autumn. A warm border and good soil will not be given in vain.

**Cosmos bipinnatus.**—If only on account of the lovely pyramid of its unique foliage, this would prove invaluable in many parts of the garden, more particularly where it is possible to form large groups here and there. Indeed, so

far as its flowering is concerned, even in hot summers one has to be satisfied with foliage alone, unless special precautions are taken, or a special mode of culture is indulged in. Above the abundance of its beautiful leaves the elegant rose, mauve-shaded flowers are very showy, and in sunny or favoured localities it would repay for prompt and early attention. In other districts—and these perhaps the more numerous—it would be well to treat it more in the way of a biennial. By sowing the seed at the end of July and growing the plants on, a start would be made that would find its reward the following year, not only in larger bushes, but in a free and prolonged flowering also. It should always be planted in the hottest situations quite removed from shade, and in good condition is a fine plant indeed. Though strictly an annual, its rather late flowering minimises its value, though this may be altered by starting the plants in the previous year.

**Show Dahlia Mont Blanc.**—This is a magnificent pure white show Dahlia, and when well grown takes a lot of beating. Unlike some of its class, it usually opens its centre before the outer petals begin to decline, especially if shading is practised. I recently saw some grand blooms of it in the garden of an old Dahlia grower, who, by the way, does not believe in growing from old roots. Not only does he find that growth is more vigorous and free-flowering from cuttings, but also that tubers of many varieties kept through the second winter often die right out. I have heard people say they would try their hand at Dahlias, but should have to grow them on the same plot of ground every year, which they think would not answer. I know several enthusiastic amateurs so situated who grow excellent Dahlias of all kinds, not by heavy manuring altogether, but by biennial incorporation of a little fresh loamy compost and the use of a little approved fertiliser when the buds commence to form.—J. C.

#### POLYGONUM BALDSCHUANICUM.

VARIOUS foreign horticultural journals have lately published laudatory notices of this fine plant, which, two years ago, I described and recommended in *Le Jardin*, and which was then figured in that journal from a fine specimen in flower amongst the collections at the Muséum. The plant has well fulfilled all that it then promised. Since it was figured in 1895 it has increased greatly in size, and in the present year its long twining stems are not less than 26 feet in length. About the middle of June it commenced to expand its large and elegant clusters of white flowers tinted slightly with pink, and has continued in bloom ever since. At the present date it is still covered with bloom, and at the same time displays its handsome seeds, which are tinged with red and are as ornamental as the flowers.

This original specimen is not the only one at the Muséum. There is another very fine and pretty strong one (18 feet or 19 feet high) on the slope of the Labyrinth, and a third, about the same size and in full bloom, in the nurseries of that establishment, not to mention the young plants which have been propagated from the larger specimens.

*Polygonum Baldschuanicum* was introduced from Turkestan in the year 1882 by Dr. Regel (who was then director of the Botanic Garden at St. Petersburg), and was described and figured by him in the eighth volume of the "Actes du Jardin Botanique de Saint Petersburg" (p. 684, pl. 10). It was also figured in the "Gartenflora" for 1888 (p. 409, pl. 1278). From Dr. Regel the Muséum received the first specimen about the year 1885, and a second one in 1892, and this establishment first invited public attention to this remarkable species by exhibiting a specimen in bloom at a meeting of the Société Nationale d'Horticulture de France on September 13, 1894, and again on September 26, 1895. On the occasion of this last exhibition Professor Max Cornu

gave the history of the plant, and dwelt strongly on its ornamental value. In 1893 the Muséum was in a position to distribute seed of it, and in May, 1893, sent a growing specimen to the Royal Gardens at Kew, and this is very probably the same plant which is now so much admired by English amateurs. This very handsome *Polygonum* is quite hardy in our climate. The stems, it is true, suffer more or less from frost, according to its intensity, and may even be cut down close to the ground (as they were last winter), but they come up again vigorously in the following spring. In any case, the root will pass the winter in safety under a mulching of dead leaves.

The plant appears to find itself especially at home in well-drained, and even dry, soils, and shows no dislike to soil of a calcareous nature. It seeds abundantly, but many of the seeds are sterile. It can be multiplied by layering, but is tedious in taking root. Multiplication from cuttings succeeds well only when done in a propagating house and under special conditions.—L. HENRY, in *Le Jardin*.

#### SHORT NOTES.—FLOWER.

**A good dwarf blue Ageratum.**—This will be found in a very dwarf, compact, tree-blooming variety, grown at the Chiswick Gardens, the flowers silvery blue and produced in a dense head. Some would probably term the colour a bright violet-blue, but much depends upon whether the flowers are seen in the sun or in the shade. A large number of plants were in bloom, and they were singularly uniform in character. It is named *The Zoo*.—R. D.

**Erigeron speciosus superbus.**—This well-known border plant is still yielding a large number of its showy blossoms, much larger than the largest of the Michaelmas Daisies now flowering in such numbers. Few plants are more easily grown than the above, and fewer still provide such a profusion of blossoms from June to October.

**Aster St. Brigid.**—This variety belongs to the *Novi-Belgii* group, and promises to be among the most useful of this beautiful family. The name will not be familiar to many at the present time, as it is a new variety of the present year. But we were struck with its distinctness and beauty in Messrs. Barr's collection the other day. The flowers are produced in an erect, freely branched panicle, and pure white save for a flush of delicate pink near the tips.

**Aster vimineus.**—It is impossible to describe the beauty of this kind, which is undoubtedly one of the gems of this large genus. The plant is about 3½ feet in height, of a singularly neat habit of growth throughout, while its numerous pure white blossoms possess a perfectly natural spray-like arrangement on the slender branches and twigs. In the open border when left alone the plant inclines outwardly with a singularly pretty and graceful effect when in flower.

**Anemone japonica alba.**—As seen at Kew this is one of the best of autumn flowering plants. The growth made this year is dwarf in comparison with that of other years, but the freedom with which it is flowering leaves nothing to be desired. The plan of massing the plants in beds by themselves is good, as they require only the setting of grass to make them effective. The old single white form is still as good as any and better than most of the newer ones.

**Two old plants.**—I allude to that fine old *Calceolaria*, *C. amplexicaulis*, than which no *Calceolaria* ever raised is more beautiful, and to *Verbena venosa*, full of flower and hardier than most bedding plants. Beds of the latter in the distance gave the effect of large patches of Heather. The *Calceolaria* was mostly seen dotted about among other things, and would look better in a mass, its clusters of soft yellow flowers, borne on tall stems, requiring no better setting than its own foliage.—J. C. T.

**A fine single Dahlia.**—A very brilliant single Dahlia is one grown largely at Kew and appropriately named *Huntsman*. It is particu-

larly free flowering, and the flowers are borne on long straight stems; they are also shapely enough to please the most exacting florist. This stands out very conspicuously from all the others, the shade of scarlet being so telling. One wants to see Dahlias growing, and not set up as at shows, to judge of their value, as habit has so much to do with their effectiveness.

## FRUIT AND VEGETABLE CROPS.

### SUPPLEMENTARY.

**The Duffryn, Mountain Ash, S. Wales.**—On the night of May 13 we experienced severe frost, completely blackening all expanded Strawberry blossoms: even hardy Ferns that grow wild in the woods and mountains were burnt black. This night, no doubt, proved destructive to all fruit blossoms. Apples are an average crop, Keswick Codlin, Blenheim Orange, and Worcester Pearmain being the best. Pears light; Passe Colmar, Jargonelle, Bergamote d'Espereu the best. Peaches scarce, a light crop on Barrington, though covered over with greenhouse blinds. Plums a failure. Raspberries a heavy crop of fine fruit. These are tied to wires stretched from post to post. I head them back to the height of 6 feet. A thick mulching in the autumn of good manure seems to answer their requirements. Gooseberries fair crop. Currants under the average.

Potatoes small, but clean. Up to Date and Clanceller proved the heaviest croppers; Satisfaction proved rather unsatisfactory. Peas excellent, early and fine, especially Gradus, Duke of Albany, and old Fillbasket; May Queen cropped well. Runner Beans have cropped heavily, and will continue if the weather keeps favourable.—J. E. DAVIES.

**Munches, Dalbeattie.**—The fruit crop of 1897 has not been quite a satisfactory one here. Strawberries, considering the ground occupied, were a poor crop, flavour better than in some previous seasons; sorts that cropped best, Garibaldi, Noble, and President. To my taste, President had the best flavour. Gooseberries very plentiful, but the fruit generally small. The same may be said of Red and White Currants. Raspberries were abundant, but under the average size. Black Currants under the average crop. Cherries total failure. Plums very few, with the exception of Victoria (good crop), Kirke's fair, and a small early one (not sure of variety) which bore an average crop. The only Apple trees that have borne a crop this year are some old espalier ones; Warner's King, Lord Sutfield and another of the Codlin tribe being the best. But in other gardens in the district many trees have been heavily laden. Pears (and on walls only) have been under average here. Damsons very scarce.—A. MURRAY.

**Waddesdon Gardens, Aylesbury.**—The fruit crops in this locality may be said generally to be very poor. Amongst Apples, the Codlins have a half crop of small, imperfectly-set fruits, while Ecklinville, Stirling Castle, and Cellini have partial crops of good fruit, and the same may be said of isolated trees of Cox's Orange Pippin and Margil. The most of the standard late kinds are a failure. Of Apricots, Pears, Plums, and Damsons a total failure may be recorded. Of small fruits, Gooseberries had half a crop of good fruit, and Raspberries, Strawberries, and Currants had full crops of very good quality, but which, in consequence of the intense heat, ripened quickly.

Vegetables of all kinds have been abundant and good. The weather during the early spring was unfavourable and crops made but slow progress for some time. The earlier cuttings of Cabbage and Cauliflowers were a week or more later than usual: the best results of these for early crops were obtained from sowings made in gentle heat, about the end of January, of Veitch's Earliest of All Cabbage and the Early Forcing Cauliflower. Turnip Extra Early Milan and the Parisian

Forcing Carrot in sheltered positions are both doing well. The earliest gatherings of Peas grown in the open were a week or ten days later than the average; these were from sowings made in pots, and planted when 2 inches or 3 inches high, of Veitch's Extra Early Selected, a reliable variety for first crop. All successional crops have done well and stood the intense heat of July without causing a break. Asparagus was unusually plentiful. Globe Artichokes, a vegetable much in demand here, were more freely produced and of better quality than ever before noticed. Salading very good, the heat and drought of July were too much for the Cauliflowers, all the kinds grown suffering equally. Sharpe's Victor and Veitch's Improved Ashleaf Potatoes are good crops and sound. Later plantings look well.—J. JACQUES.

**Madresfield Court, Great Malvern.**—Apples are a good half crop, taken altogether, but much of the fruit is unsound owing to the depredations of the Codlin moth. There are many promising young orchards of choice fruit on this estate, especially on small holdings, the result of supplying gratuitously a choice selection of good trees. Pears on walls are good and clean crops, slightly undersized, possibly owing to early drought followed by the absence of sun during August and September. Stone fruit is under average, Plums especially being very scarce, consequently prices rule high. Bush fruits abundant and good in quality.

Vegetables, with the exception of Peas, abundant and good. The early and continued drought caused the late Peas to mildew, which baffled the best efforts to check. Although I grew the late varieties of Peas in trenches as for Celery, I never had greater failures. Hitherto this system of cultivation had given abundance of late Peas, of that best of all late Peas, British Queen and Ne Plus Ultra, the only fault being the tall sticks required, but more than compensated for by the perpetual or continuous bearing merits of such excellent Marrowfat Peas.—W. CRUMP.

**Coolhurst Park, Horsham.**—The Apple crop is almost an entire failure in the orchard here. In the two previous years there were exceptionally heavy crops, so that may have something to do with this season's failure. What blossom came was soon over, never developing into full form and had the appearance of being insect-eaten, and latterly rolled up like wool balls. In this quarter Apples are variable, as there are places where the crop is fairly good, while in other parts they are thin and, generally speaking, small, owing no doubt to the great drought that prevailed for the most part of the season. The trees are clean and healthy generally, so that may lead to a good crop next season. Pears are poor generally, only a few with anything like a crop, and these are Beurré Superfin, Beurré Rance, Beurré Clairgeau, Williams' Bon Chrétien, and a few others. Plums, with the exception of Blue Gage, Belgian Purple, Jefferson's, and Pond's Seedling, are a failure. There are no Cherries, but in no season do they do well here, the soil and situation do not seem to suit them. All about this locality there is a great scarcity of these fruits, and the failure in most cases is put down to the severe frost in May, which varied from 6° to 8°, and took clean off all blossom that happened to be out at the time. Black and Red Currants have been abundant and fine in quality. Gooseberries are excellent all through. The trees have all been healthy and clean, having been gone over with the engine early in the season to keep insects in check, then well washed with clean water before the fruit began to colour, so that all dust might be removed from it before the nets were put on. Figs are excellent on the open wall, but slightly under-sized owing to the dry state of the ground. Mulberries plentiful and fairly large. Cob Nuts a good average crop. No Walnuts. Raspberries were small in berry and under an average in crop. To have these good they must have plenty of moisture at the roots and slight shade.

Vegetables have been variable owing to the drought. Peas were good up to the end of July,

by that time those that were coming on were attacked with mildew, which cut them down so that a break in the supply occurred. Later crops will now give a supply, as the rains lately and still falling have been beneficial to these. Cauliflowers have suffered equally as bad as they did in 1893. Now we look hopefully for the autumn and early winter supply being good from the present moisture giving them a new start. Cabbages were good in the early part of the season, now they are totally eaten up with fly. Early summer planted Coleworts are now in fine condition for use. Brussels Sprouts promise an excellent crop. Carrots and Onions are clean and healthy, being perfectly free from maggot. Potatoes are quite free of blight and a plentiful crop. Early Puritan, Snowball, Beauty of Hebron and Red skin Flourball have all been excellent in quality. All Potatoes here are grown on ground that has been well manured the previous year, only a dressing of burned ashes being given at planting time. Celery has made fine growth and promises well for a full crop. It has been occasionally watered at the roots and over the head with soap-suds, and immediately after being done the plants were all dusted overhead with lime and soot mixed which stuck on the wet leaves, and the result that no fly has attacked the plants in any way, which is a common occurrence in hot, dry season.—A. KEMP.

**Englefield, Reading.**—Gooseberries an excellent crop. Currants, red and white, good black, not so good. Strawberries good. Raspberries poor. Apricots good. Peaches and Nectarines good. Apples very poor. Pea fair. Plums half a crop. It has been a bad season again for the gardens in general about here. The earlier part of the year was most favourable, as we had some very nice rains at the end of April and the beginning of May, but since that time we have had a continued drought through which kitchen garden crops have had great difficulty to exist.

Asparagus was very good indeed, and Broccoli and Early Cauliflower remarkably good. Early Peas were very good, but ripened off early. Through drought, later crops poor. Early Cabbages good. Potatoes are looking well, but when rain comes I am afraid they will make a second growth. Celery and winter vegetables are bad in need of rain.—JAMES COOMBE.

## GARDEN FLORA.

### PLATE 1140.

#### HYBRID COCCINEA CLEMATISES.

(WITH A COLOURED PLATE.\*)

THE new hardy Clematises recently introduced by Messrs. George Jackman & Son, Woking, and figured in this number, are the most complete break-away from all existing garden varieties which has come before our notice in several years. They have been obtained by hybridising the old herbaceous variety *C. coccinea* with some of the leading hardy climbing varieties now seen in nearly every garden. The three varieties figured are Countess of Cornwall, Duchess of York and Duchess of Albany, all of which have been certificated by the Royal Horticultural Society, and were greatly admired at the Temple show last May. They are quite distinct one from the other and are of compact late form, with four to six petals to each flower; the blooms are particularly thick in substance and stand out well from the foliage, and have one distinct advantage over the other climbing varieties in being suitable for cutting, the blooms lasting for several days in water. They are strong growers and flower freely from the

\* Drawn for THE GARDEN by H. G. Moon, Messrs Jackman and Sons' nursery at Woking. Lithographed and printed by J. L. Goffart.



HYBRID CLEMATIS

CULTIVATED BY THE GARDENERS OF THE GARDENS OF THE UNIVERSITY OF CALIFORNIA



young wood. Countess of Onslow is a bright chery purple, with a broad band of scarlet down the centre of each petal. Duchess of York is a delicate flesh-pink, with a deeper tinge down the centre, and Duchess of Albany, a beautiful bright pink, deeper down the centre, the edge of the petals softening down to a lilac-pink. This new race is sure to be a great acquisition to the already long list of hardy fruiting varieties.

## THE WEEK'S WORK.

### HARDY FRUIT GARDEN.

**FRUIT TREES.**—With the exception of the very best kinds, such as Salway and Walburton Admirable, trees are now clear of fruit, and should be looked over, when every particle of food not required for another season should be cut out to give the remainder every facility to become thoroughly ripened. After this, root-lifting and such like matters should have attention, and the old summer muleh, if any still remains on the alleys, should be removed. With regard to the above-named Peaches, they will be valuable in districts where other hardy fruits are scarce, and to ensure their better ripening a few sashes placed against the wall in front of the trees will bring this about. A little protection in this way works wonders, and I have seen equally as good results obtained from the employment of the tops of handlights placed at intervals over the trees.

**FRUIT GATHERING.**—In districts where Apples and Pears are plentiful much time will now be occupied in the gathering and storing of the mid-season varieties. The latest keeping kinds will, of course, not be ready for some few weeks; in fact, they should be allowed to hang—weather permitting—until the second week in November. Great care should be exercised in the gathering, and none should be pulled unless they part readily at the stalk, particularly Pears. If this simple rule is ignored, the fruits will neither keep nor ripen properly, and with Pears premature gathering generally results in the shrivelling of the skins, which renders the fruits valueless. The fruits in all cases should be carefully gathered by hand, and not shaken down, and they should be placed in baskets padded with soft hay or moss to prevent the wicker-work from marking or bruising them, and conveyed at once to the fruit room. If possible, the Apples should be stored in a separate room from that in which the Pears are placed. Apples merely require the best kept from them, and, failing a fruit room proper, they will keep well enough in cellars, provided these are not too warm or too dry. Barrels and boxes may be used in this case, and if care be taken to see that none but sound fruits are stored and that this is done by hand, placing each fruit carefully one on the other, there need be no fear at that they will keep well. Avoid the use of raw hay, or such like material, as this imparts bad flavour to the fruit; and if the boxes and barrels are perfectly clean and dry, nothing whatever is required, and the fruits may be placed directly into them without further preparation. When storing Apples in a fruit room, they may be placed several layers thick if the room is not large, but Pears are best kept in single layers, as they can then be the more easily inspected. If Apples and Pears have to be stored both in the same room, keep the former at the coolest end, and place the Pears in the warmest portion. Even if there are two fruit rooms set apart, one for each kind of fruit, it is an advantage to place some kinds of Pears in the Apple room at a time, as their season of use is then lengthened considerably, and they can be removed to the warmer room for a few days to finish ripening. By placing part of the crop of Marie Louise in the cool atmosphere of the Apple room, this Pear may be had in good condition for a much longer period than if placed altogether in

the Pear room at the outset. There are several other kinds which can also be subjected to the same kind of treatment, such as Althorp Crassane, Knight's Monarch, Seckle, Dama's Hovey, &c. After the trees are cleared of fruit, get any root-lifting or lifting and transplanting done. Other work which comes under this heading will be the harvesting of Walnuts. These should be thrashed or beaten from the trees, as the husks are now bursting open. Gather them up, lay them out thinly in an open shed, and when the husks part readily from the shells, clean and dry them, and store away in a cool but not too dry a place. If wet weather should set in, late Plums may be gathered, and kept in good condition for some time if laid out thinly on a shelf near the window in the fruit room. This will enable the netting, muslin, or whatever kind of protection was used to secure the fruits from insects and birds, to be taken down, dried, and stored away for future use.

**MANURING.**—Once more attention must be turned to this important matter in connection with fruit culture, and those who are fortunate enough to have plentiful supplies of manure should take time by the forelock and get Gooseberry, Currant, and Raspberry plantations dressed forthwith, unless early pruning of the two former fruits is in contemplation, when it may then stand over for a week or so. But where birds are troublesome and the question of pruning cannot be entertained until the turn of the year, then the manuring should be done at once. The manuring of Morello and Kentish Cherry tree borders is best done now, and where there is no prospect of the pruning of Apples, Pears, and Plums being done until the close of the year, all that stand in need of food may have a surface dressing now, when the autumn rains will carry its fertilising properties down to the roots. In all cases clear the surface from weeds before applying the manure, and the latter should be spread evenly over the surface and left so, as it can be pointed in after the turn of the year, or when the trees have been pruned and winter dressed.

**PRUNING.**—Currants and Gooseberries are fast shedding their leaves, and as soon as all are down, the bushes may be pruned at once, provided they are considered safe from bird attacks. Where much fruit growing is carried on, an early commencement goes a long way towards securing an early finish in these matters, and the work can also be got through with much greater expedition now than when the weather becomes colder and daylight is shorter. After being pruned, measures should be taken for dealing with insect pests, particularly the chrysalides of the Gooseberry and Currant sawfly, where the caterpillars of the latter have been troublesome during the past season. The soil under the bushes should accordingly be removed to the depth of 3 inches or 4 inches, and should either be taken away to be burnt with other garden refuse, or be buried deeply in some other part of the garden away from the bushes. Then put a little fresh lime under the bushes and make good the deficiency with soil from between the rows, after which give the plot a good dressing of manure.

**STRAWBERRIES.**—These should be gone through once more both to relieve the plants of all late-formed runners and to get rid of weeds before winter sets in. Plants set out early in August have made splendid crowns and good foliage, and look like yielding excellent results next year. Forced plants of Royal Sovereign set out earlier in the season produced an abundance of flower-spikes during the latter part of August, which, had they been allowed to remain, would have produced a fine second crop of fruit, rivaling, if not surpassing, in this respect V. H. de Thury, which does so well in many places as an autumn fruiter. Two and three-year-old plants have made good growth during the past few weeks, and are now amply provided with leaves for the protection of the crowns during the winter months. If the manuring of old plants in the shape of a top-dressing either of manure, old hotbed materials, spent Mushroom manure, or soil from under the potting-shed bench has not been done, it should

be no longer deferred. This should be worked close up to and around the crowns, which in the case of old plants stand considerably above the level of the soil in which they are growing. This will give them a new lease of life, particularly if the soil has become impoverished through neglecting to top-dress in previous years. A. W.

### KITCHEN GARDEN.

**FORCING VEGETABLES.**—In most gardens choice vegetables have to be produced throughout the winter, and very often under great disadvantages as regards convenience. The modern forcing pit has been the means of reducing the labour required in forming fermenting beds made up with leaves and litter, but there is still much to recommend these when properly prepared, as the heat produced is of a mild character and in every way suited for bringing on such things as Asparagus and Seakale. Where unheated pits or frames have to be used, a good body of leaves should be got together as soon as possible, so as to allow time for them to become warm before they are placed into the frame. If sufficient leaves can be obtained, they will give a more lasting warmth than when manure is added, but they must be prepared by turning them over several times and watering, if necessary, to encourage them to heat. The greater the quantity of leaves, the longer they will give warmth; therefore in filling up the pits they should be trodden as firmly as possible, and by bringing them well up to the top, such things as Asparagus and Radishes will be close to the glass, which is very essential, especially during the short, sunless days.

**STORING ROOTS.**—The Potato crop is not a heavy one this year, and, what is worse, the disease appears to have shown itself more or less in most districts. It is therefore necessary that extreme care be taken in storing the tubers, as a few affected ones might lead to great loss when they are placed in clamps, which probably would not be opened for many weeks. The dry weather has assisted in detecting unsound tubers, as they have come out of the soil in a clean condition. Unless large quantities have to be stored it is more convenient to place them in a frost-proof shed and cover with a good thickness of straw. In this way they are easily examined, and afford useful work during inclement weather. In clamping Potatoes, it is a great mistake to select a site under large trees, as the drip from these keeps the covering in a wet condition. At the same time they should not be exposed to the north or east winds, as when frost accompanies these it soon penetrates to the tubers unless a large amount of covering is used. The soil should only be thrown out a few inches to form the base, and if sloping ground is selected, there is less danger of heavy rains reaching them. A careful selection of suitable tubers of the different kinds should be made for seed. It is better to do such work at once, and store them, if possible, in single layers so that they can be easily examined; they keep better, and there is less danger of them sprouting than is the case when placed in heaps. The tubers of the early varieties especially should have immediate attention in this way, or they soon commence to grow. A free amount of ventilation is necessary to keep the tubers in a good condition, but it must be so managed that frost does not reach them. Provision should be made for storing other roots, such as Carrots and Beet. The latter may be lifted at any time, it being, however, better to do so early than allow the roots to remain in the soil after the autumn rains have commenced, as it not only becomes more difficult to get them out of the ground in a clean, dry state, but many of them may split and become practically useless.

RICHARD PARKER.

**Wasps.**—I used to be greatly infested with wasps, especially in my vineries, until I purchased two or three sixpenny butterfly nets, in which about April and May I caught all the wasps I

could come across (females, I imagine), the result being that I had not a tithe of these Grape and Plum destroyers visit me. This spring I killed from thirty to forty taken in this way, and I have since scarcely seen a wasp in any of my houses. No doubt this has been a bad year generally for the wasp family; why, I know not, for the winter was mild and the summer fairly warm. At all events, I think this is about my eighth year of the butterfly net process.—GWENT.

## ORCHARD AND FRUIT GARDEN.

### NOTES ON STRAWBERRIES.

WE have to thank our readers all over the country for so kindly replying to the following questions, and we hope that the notes will prove valuable:—

*Will you kindly aid us in throwing some light on Strawberries of best quality for the use of private growers, as market growers have a different standard from that which applies to the private gardener, and favour those kinds that bear carriage, rather than those that are remarkable for flavour and quality? For those who use their own fruit we think that a different standard should be in use.*

1. *What kinds do you consider the best for flavour in your district, i.e., as grown in gardens, not taking into account those grown in the open field for market?*

2. *The best early and late kinds for the open air in your district?*

3. *Which of the newer sorts do you find most worthy of cultivation from a garden point of view?*

4. *The best time to plant so as to secure the best and most regular crops?*

— These were an exceptionally fine crop. Sir Joseph Paxton last year was very fine in point of finish, but this season it was much larger and the colour of berry finer, indeed more so than I had ever seen it in former years. Vicomtesse Héricart de Thury came next in point of quality and abundance of crop. President has borne out in a high degree all its former character as a first-class cropper with berries of excellent flavour, and, like Paxton and Vicomtesse, travels well. Royal Sovereign was grown in the same brake in parallel rows with the above, and its weight of crop in all respects was equal, if not a shade heavier, but in point of flavour it is behind, and the berries are softer and lighter in colour, and on that account it is not so acceptable as a first-class dessert fruit. There is always an uncertainty about British Queen; it seems fastidious as to soil, for, although grown along with the others here in well-cultivated land, the Queen is uneven in its growth, some of the plants doing well, while others in the same row never make free healthy growth. Still, it is one of the best flavoured, and can ill be dispensed with. Empress Eugénie—or, at any rate, one under that name—bears well, but the flavour is only second-rate; the berries are large and mostly wedge-shaped. It comes in later than the foregoing, and is useful in that respect to lengthen the supply. Many of the varieties recommended in these pages have been grown here with every care to prove their fruiting and flavour qualities along with the standard kinds, and yet they are wanting in some important points to be worth growing in a private place for high-class dessert fruit. It must be very conflicting to many to decide which are the best for general use, for there are too many kinds mentioned, and particularly these very large-berried ones are all more or less deficient of flavour, however well they may look as individual fruits. The three kinds named at the beginning of this article are unquestionably in the front rank of all grown

at the present day, either for the market or the private gardener, as good all-round kinds that can be thoroughly depended on in all soils and situations. I have grown them on stiff tenacious clay on the north side of the Pentland Hills in West Lothian, and in Forfarshire, where the soil was light and thin, resting on gravelly rock; in Sussex on deep loam, with a dash of clay in it; and the crops in all these cases never failed to be satisfactory. Keens' Seedling does not do well here, and is now discarded after repeated trials. There is no better plan to get at which is best than growing many kinds together of the newer sorts with every care; and the same plan should be followed in forcing, to get at which are best. These large-berried kinds are not suitable for preserving in private establishments. Royal Sovereign is not suitable for preserves, always being thin. The second and third gatherings of Vicomtesse make splendid preserve, the berries being small and firm, and parting freely from the husks, and not so sweet. It makes a preserve almost equal to what the old Grove End Scarlet makes, and no kind grown equals it in that respect.

To grow the Strawberry well, it wants deeply cultivated soil well enriched with manure. The cultivator at all times should aim at vigorous, strong, healthy plants that will bear freely fruit of fine quality; and to get that there is no better way than trenching and putting a good supply of vegetable refuse of every kind into the bottom of the trench. This is of great importance when a dry season occurs such as the past one has been here. The surface should be made level and firm, and then the plants put out in rows 2½ feet apart, and 2 feet from plant to plant in the rows, and that distance apart each way will give ample room for three years, which is long enough for the plants to stand under the best cultivation. On thin, light soils, resting on gravel, two years are long enough for the plants to stand. The selection of the runners is a very important part of the culture, for on this depends much of the future success of the crop. When the fruit is being gathered, I note all the plants of each kind that possess special properties as to vigour of constitution and fine, symmetrical, well-coloured fruit. Of these the runners are taken with the view to maintaining a similar constitution in the future plant, as heavy cropping and much propagation have a deteriorating influence. Layering into small pots is much the best plan for the private gardener, whether these may be for forcing or planting out in the open as soon as rooted; but in my case I only root enough for forcing, as these are planted out as soon after fruiting the following spring, as they are well hardened off in a little shade, and ground can be got ready. There is no better plan where it can be adopted than that of sowing the Spring Onions 2½ feet apart, and planting between the Strawberries does not in the least interfere with the maturing of the Onion crop. In this way they can be got out early in the season, so that they can be well established before the autumn sets in. No planting should be delayed longer than the latter end of July if a full crop is expected the following season. Small plants put out in August have not the same chance of getting established before the winter sets in, and may suffer if it happens to be severe. To keep the ground thoroughly clear of weeds at all times is one of the cardinal points of success. There should be no digging or deep hoeing of any kind among the plants in case of cutting the surface roots. Runners should never be allowed to gain a footing, as they only exhaust the plants at a time they should be forming matured crowns for the next year's crop, but to let these grow until they form a thicket between the rows, as is to be seen in some cases, means the crop will just be in proportion to the strength that is left in the fruiting plants. The earlier the plants are mulched after the crop is gathered the better, as they derive benefit from it, the rains washing the goodness of it into the soil to feed the surface roots. The material on the surface retains the moisture in the

spring. Free growth of the foliage is of great advantage if late frosts and cutting cold winds occur. This spring I had no loss of bloom from the full, healthy foliage that protected it. Year or two ago a similar late frost happened, when much loss was the result in the neighbourhood, and thin crops of fruit followed. The full, heavy foliage here saved the bloom, and I had an excellent crop of fine fruit. Watering becomes necessary if the weather should be dry after planting to prevent the plants getting dry, which would check the growth and possibly lead to an attack of red spider. The plants are very much benefited by a good soaking of manure water after they come into bloom.—A. KEM, *Coolhurst Park, Horsham.*

— I would say that Héricart de Thury, Keens' Seedling, President and Royal Sovereign are all good-flavoured kinds. I have a difficulty in getting any of the British Queen family to grow well on this soil, consequently they are not fruitful. Dr. Hogg does the best and is of a fine flavour. On a south border containing about ten kinds, Laxton's Noble and Royal Sovereign were the first to ripen, followed by Héricart de Thury and Keens' Seedling, which were only about ten days behind the first-named. Jubilee and Newton Seedling do well with me for late crops on north border. Frogmore Late Pine is the best late one, but, as with the Queen family, it grows badly under good ordinary culture, hence I have great difficulty in getting runners to keep up the stock. There are so many good kinds grown nowadays that it is best to find out what suits each soil and climate, and keep to them for the principal supply. Royal Sovereign is the best of the newer kinds. I had some splendid fruits of it this year from plants put out of small pots last August. I find it is somewhat more disposed to mildew and red spider than the thicker-leaved kinds. I am trying Monarch, Leader and one or two others, and hope to report on them another year. I generally plant at two different seasons. Those for the earliest fruiting are grown on south border in three ages thus—two years planted, one-year planted, and this autumn runners. The last-named always follow early Peas. I give the border a dressing of good rot horse manure as soon as the Peas are over and cleared away, dig a good spade depth, and break up the soil well. I plant from small pots in rows 2 feet 6 inches apart and 9 inches from plant to plant in the row. I firm the soil well round each plant, give a good watering, and if the weather is very dry, mulch the surface with some old Mushroom manure. I invariably get good crops of fruit the following season from plants thus treated. I cut up the oldest of the three lots each year. I have main crops of Strawberries for preserving, & are generally produced from old forced plants. These generally follow second early Potatoes any other crop which is cleared off by the end of July. In this case I arrange to have the ground double dug and well manured the previous winter. As soon as the Potatoes or other crop are removed, I give another slight manuring, and dig it in if it is all dry, tread the ground well over to firm it, and plant in rows 2 feet 6 inches apart and 15 inches from plant to plant in the row. It will be noticed that in planting the ones on south border 9 inches apart in the rows was the distance given. I ought to have added that after the first year's fruiting I generally cut out each alternate plant. The old forced plants invariably give good crops of fruit the year after planting and the two following years, when I cut them up. It will be seen that in both cases I clear a portion off each year, and make a new plantation, thus ensuring that plants are more than three years planted. After clearing away the old foliage and runners from between the rows of the older plantations, in August, I generally give a dressing of well rotted manure, with some wood ashes or charred refuse mixed therewith. The manurial portions of the dressing get washed into the soil during the early autumn months, which being taken up by the roots, go to the formation of stout embryo fruit-trusses for the following season's crop.

spring, before putting betwixt the rows of plants the necessary material for keeping the fruit dry, I generally give a good sprinkling of some manure rich in potash. Some of the fish manures advertised answer for this purpose well.—H. J. VYTHES, *Grimston Gardens, Tadcaster*.

—I think the Pine varieties the best flavoured, so far British Queen cannot be beaten. Of these we have had several good things in the way of seedlings from the Queen, and I may in time be able to give a longer note on the best flavoured varieties. Veitch's Perfection promises well, and Mr. Allan's Empress of India is a grand flavoured fruit of the Queen family. Latest of All another of its offspring, in my soil is superior to the Queen, more robust and equal in quality, and the most valuable late Strawberry flavoured. Royal Sovereign is the most reliable early fruit and this crops grandly. For years I grow the much abused Noble, and with fruits at the end of May one does not expect British Queen quality. Few will deny that Royal Sovereign will grow in is of good quality. I class it as the most useful early variety. Mid-season croppers are not named so far, few kinds in this soil are superior to the old President, and for preserving I rely upon Vicomtesse H. de Thury. To follow these we have British Queen, and I have stated these are none better, but it is not a heavy cropper and needs good cultivation. I grow Latest of All largely, this is excellent from a north border and young plants. I find Royal Sovereign, Lord Sulfield, Empress of India, Gunton Park, Linton's Leader, and Latest of All the best for garden culture. On the other hand my soil is light, and I give good culture, and with the most growers rely upon young plants, only taking one crop. The best time to plant is as soon as the runners can be obtained, that is usually from the middle of July to the middle of August. I grow special plants for runner production, not allowing these to bear fruit, as it is impossible to get early runners from plants in full bearing. I rely upon young plants, and by so doing get fruit earlier and plenty of it. I layer all the plants into pots and give deep culture, plenty of manure and firm soil. After the Strawberries are cropped I use the land for a winter green crop, and digging, only cleaning the surface. By growing in young plants I find I get the best and most regular crops.—G. WYTHES, *Syon Gardens, Brentford*.

—Of this important fruit we have had an excellent crop, but its duration has not extended so long a time as usual in consequence of the intense and long-continued heat of July. For the fruit supply out of doors I depend on Noble, La Grosse Suerée, and Royal Sovereign. I have grown all other known early sorts, such as Laxton's No. 1, Black Prince, J. Ruskin, and a few others. These may turn in in a few days before the mentioned above, but they are so small, ofapid flavour, and poor in crop, that it is a waste of time and space to have anything to do with them. Lack of flavour I know may justly be imputed to Noble, but its earliness, fine size, good cropping qualities, and handsome appearance entitle it, in my opinion, to be grown to a limited extent in every garden. La Grosse Suerée with us is nearly as early as Noble, and for all purposes is one of the most satisfactory Strawberries. I agree with most of the good things said of Royal Sovereign, but for forcing its growth of foliage is too ample, causing it to take up nearly twice as much valuable space on the forcing shelves as La Grosse Suerée or the other dwarfed growth kinds. Out of doors Royal Sovereign is a few days later than La Grosse Suerée. Without doubt Countess is the best flavoured as well as one of the handsomest Strawberries known at the present time. British Queen does not succeed with me; therefore I do not include it in my list, but Dr. Hogg, one of the same breed, does. The colour of this variety is very pleasant, and although the colour may be against it, still it is one of those that should be grown for its good flavour by everyone. Vicomtesse H. de Thury is one of the best flavoured, best coloured, and best croppers

we have, fine for preserving. La Grosse Suerée is, as mentioned before, indispensable, combining good flavour with all the characteristics of a good Strawberry. Sir Joseph Paxton should not be omitted. Aromatic is another variety which succeeds well here, and is of excellent flavour, but as it is rather a soft fruit, it will not do to send long distances by rail or post. There is no question as to the new variety certificated by the Royal Horticultural Society last year, Veitch's Perfection, being of exquisite and sweet flavour, and if it proves to be a good grower and bearer it is sure to find its way into every garden in the United Kingdom. The earliest of all here is Sir Trevor, a new seedling, raised in the Royal Gardens three years ago, Noble comes next, then La Grosse Suerée and Royal Sovereign. The best late varieties are Frogmore Late Pine, A. F. Barron, Waterloo, and Latest of All. For its cropping qualities Laxton's Leader should prove a splendid variety for cottagers, as it is the surest and heaviest cropping sort I know. The best time to plant is as early in August as possible to have strong-rooted runners previously layered into small pots. If these are planted on a well-prepared and manured border at this time a splendid crop of fruit will result the following season.—O. THOMAS, *Royal Gardens, Frogmore*.

—The system pursued here in the cultivation of the Strawberry is to have the beds in three divisions; one is destroyed and a new one made each year, so that I never have a bed in bearing more than three seasons. A piece of ground that has been cropped with early Peas or Potatoes is selected, heavily manured and trenched. About the last week in July, strong runners of the different varieties are got and planted 2 feet apart from row to row, and 1 foot in the row, and from these in the following season I always succeed in getting my finest fruit. I have not the labour to enable me to follow out my inclination, otherwise I would treat them as annuals. The varieties grown here are British Queen, Dr. Hogg, James Veitch, La Grosse Suerée, Lord Napier, John Ruskin, Noble, Royal Sovereign, Sir Charles Napier, and Vicomtesse Hericart de Thury. British Queen does well here; the fruit is of large size. It is in my opinion still one of our very best flavoured Strawberries, but it is not a heavy cropper. Dr. Hogg is a first-class sort, combining size and flavour, and is fairly prolific—one of the sorts a private grower should not be without. I must also include La Grosse Suerée, Lord Napier, and Royal Sovereign. My best early kinds are Noble, Royal Sovereign, and La Grosse Suerée. For late use I like Lord Napier.—G. TAYLOR, *Shrubland Gardens, Ipswich*.

—Dr. Hogg and President are the two best flavoured Strawberries I have. British Queen is not satisfactory, and I do not grow it, although it is undoubtedly the finest flavoured variety grown. Vicomtesse Hericart de Thury is much liked here, also Keens' Seedling; both are old varieties, but still very good. La Grosse Suerée is both early and good. John Ruskin is early and the fruit good in colour and size. Sir Joseph Paxton is useful where quantity is wanted, and Noble makes a fine dish, and on our gravelly soil, in a hot and dry season like this last, the flavour is fairly good. Waterloo gave some extra fine fruits and was much appreciated, as it came in when all the other Strawberries were over. John Ruskin, Noble, Vicomtesse H. de Thury, and La Grosse Suerée all do well as early varieties here, Waterloo being the best late one. As regards the newer varieties I cannot speak from experience, as I have none of them at present. Planting is best done as early as the runners can be got and the ground prepared, the runners to be layered in small pots as if for forcing. Plants that have been forced and taken care of may be used, if they have not been allowed to suffer from drought. These will give good results the following season. Where a particular or new variety has been forced and a bed of it is wanted, planting out the forced plants answers well.—Geo. RINGHAM, *Wrotham Park Gardens, Barnet*.

#### NOVEL METHOD OF FORCING STRAWBERRIES.

PRIVATE gardeners are often surprised when visiting market-growing establishments to see certain plants or fruits, which in ordinary gardens require considerable time and labour to bring them to perfection, grown well in a very simple way, and ripened or bloomed in a minimum of time. A somewhat novel yet very effective way of producing good early Strawberries for sale was recently brought under my notice. An East Anglian grower owned several long, low, lean-to houses, which in summer were occupied with Tomatoes and Cucumbers, these being planted in shallow beds of soil, the pathway being along the front of the house. In June, runners from yearling plants of free-cropping, good-travelling varieties of Strawberries were pegged down into the soil of the bed, five or six of the stoutest runners being selected and the rest removed. I should mention that the parent plants were planted some 3 feet apart all ways, so as to give the pegged down runners in question the benefit of a good amount of light and air. After pegging, or rather laying a heavy stone on each, no more trouble was taken with them with the exception of keeping down weeds. At the end of September these young plants were carefully lifted with a trowel, just after rain if possible, and taken into the lean-to house for forcing. The shallow bed of soil named was forked over, a little artificial manure worked in, and after being made firm, the young Strawberries planted fairly closely together, the most being made of the space at command. A good soaking of water was then given, and the lights, which were portable, as all fruit house lights should be, removed till the second week in November, the plants getting a few frosts on them to perfect maturity of foliage and crowns. With very little assistance from fire-heat, the bloom trusses of such sorts as Vicomtesse, La Grosse, and Keens' Seedling soon made their appearance, a dry atmosphere being maintained when in bloom, and the syringe used but sparingly, and that on fine days only after the fruit was set. The heat being raised as the various stages of growth were reached, ripe fruit was secured by the end of February and first week in March, Tomatoes or Cucumbers being then again planted. GROWER.

**Pear Emile d'Heyst.**—This is one of the most regular croppers we have, as in any form it bears freely. The fruits on the Quince stock are earlier and of a brighter colour. The season is given as November, but in my light soil the fruits do not keep till that date, and on a warm wall are ripe early in October. They are of a greenish yellow, flushed with crimson on the sunny side, flesh tender and very juicy. I am aware Pear lovers would not class this as a first quality fruit, but it is not bad by any means. For early autumn supplies it is an excellent Pear and well worth space in any collection. For regular crop I would advise the Quince stock. Fruit from trees on this stock colours grandly. The tree will succeed in any form. As a cordon it is very fine and the fruits are earlier. It is not a gross grower in bush form, and is a good Pear for light soils.—G. WYTHES.

**Peach Marquis of Downshire.**—I was not aware until lately that this Peach was one and the same as Royal Ascot. On a back wall in one of the Peach houses at Kelham Hall, Newark, a tree of Royal Ascot has for many years produced fine crops of large, richly-flavoured fruit, Mr. Webb (the gardener) thinking very highly of it. It shows much more red at the stone than most Peaches. It used to be much grown in gardens in Oxfordshire, Berkshire and Buckingham, and it was from seeing it do so well in the first-named county that Mr. Webb was induced to plant it at Kelham. I believe this Peach was raised at East Hempsted Park, the seat of the Marquis of Downshire, in Berkshire, and was sent out by the late Mr. Standish, of the Royal Ascot Nurseries, which would account for its being called by both names. However, it is a very profitable variety

and has a good constitution. The house at Kelham is unheated and in a somewhat damp situation, Royal George planted by the side of Royal Ascot often becoming mildewed, while its companion escapes.—J. C.

**Gross Plum trees.**—I was not fortunate enough to hear Mr. A. H. Pearson's lecture on Plums a few weeks ago at the Royal Horticultural Society's meeting, but look forward to seeing the same in the society's journal. My difficulty here in a poor, light soil is that young trees are unfruitful, and the difficulty is how to make them bear. With young trees more growth must be allowed to form the leaders, and I find these, again, in their turn produce gross shoots and little fruit. This note refers to wall trees, those grown as standards being more prolific after a certain age. The note by "A. W." (p. 193) is opportune, as it shows what may be done to make wall Plums more prolific in their earlier stages. I may be told root-pruning or lifting is needed; I agree with the latter done carefully before the leaves fall, but root-pruning in my case means gumming later on, with canker, and finally death. I have tried training these gross growers so that more vigour or sap is sent to the lower branches by growing the leaders more horizontally. This I find advantageous with young trees inclined to make much wood.—G. W. S.

#### AN AMATEUR'S VINERY.

The illustration is that of an amateur's greenhouse rather than a vinery, which it appears to be. The measurement is 10 feet by 4 feet 6 inches, and 7 feet high at the centre. In winter, as Chrysanthemums and other plants are housed in it, an oil lamp is used, but there is no artificial heat all through the late spring, summer, and autumn. The Vine was planted six years ago, and has borne fruit these last two years. This season there are fifty-nine bunches on the Vine, all being of fair size, excellent colour, and good quality. The situation of the house is not a happy one, for it is almost north-west. All goes to show, however, that, given a suitable variety (and that Black Hamburgh certainly is) and a little care and judgment, a fair crop of Grapes can be had with but little expense and meagre accommodation. Mr. Sargent, whose house it is, resides in Prospect Park, the higher suburb of the city of Exeter.

A. H.

**Apple Eve.**—A small flattish red Apple, known as Eve, ripening in October and remaining in an eatable condition several weeks, is frequently met with in the midland counties, especially in Nottinghamshire. I do not think it is much known in the south, as I have looked in trade lists, but could find no mention of it. The Apple is not sent out under any other name so far as I am aware. Though small, it is a very great favourite amongst lovers of sweet dessert Apples; moreover, the tree is a constant and prodigious bearer, and would pay as a market Apple. In many private gardens in this neighbourhood fine old trees of it may be found. I should be glad to learn if this Apple is really known in the south or west of England, as I think it is a pity such a good flavoured, fairly long-keeping October Apple should not be generally grown.—J. C.

\*\* An Apple under this name was shown at the Apple Conference in 1883 by Messrs. Pearson and Sons, of Chilwell. This, no doubt, is the variety referred to by "J. C." The committee considered it synonymous with Trumpington.—E. v.

**Mulching late Vine borders.**—Mulching the surface of late inside Vine borders is often neglected in autumn. If applied in September, or even earlier, it preserves the surface roots, which are of great importance, in a moist, cool condition, and later on—say in November and December, when the days grow shorter and darker, and border waterings have to be done cautiously

—the mulching reduces the need for these, as what moisture there is in the border is prevented from evaporating. Various materials are used for the purpose, some using very short litter or old Mushroom manure, and others straw. The two former are apt to cause mischief by the dust rising from them when in a dry condition and settling on the Grapes. Straw or dry Braeken is as good as anything, and no dust can then reach the Grapes. I think it is a good plan, when inside late vinery borders are found to be at all dry, to give them a good moistening in October, while as yet the days are fairly long and the sun strong enough to warrant the admission of abundance of air to dry the atmosphere again. This watering, except in cases of very shallow borders, will carry the Vines on till January.—GROWER.

**Strawberries for market.**—Many writers seem to think that market growers are very slow in taking up new varieties and adopting new and improved methods of culture. Everyone knows Royal Sovereign to be a splendid Strawberry for

that they have something superior in every way.—JAMES GROOM, *Gosport.*

**Pear Marie Louise d'Uccle.**—As an attention to the notes that have recently appeared in THE GARDEN on the above-named Pear, I should like to record a curious experience and invite attention of fruit growers to what is to me an explicable part of Pear culture. When plantations seven years ago I was strongly advised to give this Pear a trial as being of fair quality and a tremendous and consistent cropper. The tree gave a few fruits the first year and from that capital crops have been taken from them, until the present season the fruit from a quarter standpoint was absolutely worthless, there an immediate transition from the green to a mealy stage, and it was only useful for stewing. This year there is a remarkable change the fruit ripens gradually, keeps well, and of very fair quality—not, of course, first class, but close up to Louise Bonne form, quite equal to such Pears as Passe Colmar or Napoleon, and



Grape Black Hamburgh in a greenhouse. From a photograph sent by Mr. A. Hope.

private gardens. As a pot plant I do not know any variety to equal it, and for the earliest outdoor crops it is splendid, for it has a robust constitution, makes fine plants that carry a good crop the first year, and as to flavour I have always found it first-rate. I feel sure, however, that as a Strawberry for market it will never supplant Sir Joseph Paxton, for the simple reason that it is too good to stand the rough-and-ready handling that market Strawberries get. During the Jubilee season Royal Sovereign realised a good price up to the time when Sir Joseph Paxton came in, but as soon as it did, the superior travelling qualities of Sir Joseph Paxton made it the only sort asked for, and my impression is that the variety is not yet in commerce that is to supplant Sir J. Paxton. At the same time there is plenty of room for both, and my only object in writing is to warn those who have good bearing beds of Sir Joseph not to root them up until they are fully convinced

fairly be described as very juicy, melting, and of fair flavour. Now I can understand one combined conditions of improved cultivation, youth, vigour or situation being answerable for better quality in Pears, having noted the same connection with Beurré Diel, B. Bach, Triomphe de Jodoigne and Alexandre La but how the difference comes about with no apparent cause is, as I have said, to me one of the mysteries of fruit culture. If any reader has a similar experience, perhaps he will kindly give me an opinion on the matter.—E. BURRELL.

**Keeping Grapes (Geo. Kent).**—Chloric calcium, as you were informed, is the same as chloride of lime. It is said to be extremely useful in attracting moisture from the atmosphere also are lumps of quicklime, though in a degree. Grapes will be found to keep best in a darkened room where an equable temperature of 40° to 45° can be maintained with the expenditure

a minimum amount of fire-heat. A very dry atmosphere is undesirable, this causing the berries to shrivel, and damp is even more to be feared. The room ought to be kept rigorously closed during very cold and also foggy weather, and ventilated freely whenever the weather is mild and fine. The most critical periods are the changes from very cold to mild weather. If the ventilators are suddenly opened while yet the berries are very cold, the warm, moist air admitted will collect on them in much the same way as it does on the cold walls of churches and schools that have had no fires in them for several days past. Immediately after frosty weather is over the want of a little fire-heat is most felt in makeshift Grape rooms. If the pipes could be gently heated and a top ventilator or outlet for damp, one of which ought to be found in every Grape room, set open, a good circulation of warm, dry air would be promoted, this effectually dispelling damp. Grapes keep best in rooms with blow walls and thatched roofs. The most freely thinned bunches ought to be reserved for spring, and all gone over two or three times a week in search of any odd berries commencing to decay. The fungoid growth complained of is the result of and not the cause of decay.—I.

### PRUNING FRUIT TREES.

The pruning of fruit trees in its manifold forms is not even in this fruit-growing age so well understood as it should be, nor are those who practise the pruning knife confined to amateurs, professional gardeners often erring in that direction, and nurserymen who prepare the trees can lay the foundation of future evils by an injudicious use of the pruning knife. How many Peach, Plum, and Apricot trees do we still see planted in private gardens which while in the nursery plantations had been subjected again and again to hard cutting back, the result being that with more than half of them gumming and canker set in in a year or two, and if they live they are never what they should be. It was this difficulty which made many even of the old school bud their own Peaches and Apricots on only maiden trees, being then able to prune as they liked in laying the foundation for the future tree. No doubt a desire to economise space is the main reason why trade growers cut back their unsold trees so hard, but in reality there is no gain, but rather the reverse, in shortening young fruit trees beyond the point where the wood is well ripened. Peach, Plum, and Apricot trees generally break well back on when long growths are left, but should there be any fear on that point in the case of very vigorous young trees, these can be gently cut in a downward direction when the trees are tied or nailed, raising them to their proper position when the shoots have grown an inch or two. This course would only be necessary for the first and perhaps second season, and if it pays to do this with young Vines, why not also with Peaches? Then, besides warding off canker by this longer pruning system, the wall or trellis space is secured in much less time—in fact, about one third. Summer pruning is also often badly performed. In the case of weakly trees, the best way often is to let them alone the first summer, withholding the knife and allowing all the upright growths to advance to their full length. This gives the tree a chance of making headway; whereas when pruned rigidly back in summer the trees often receive a check from which they do not soon, if ever, recover. With robust trees the case is very different. But some may say, what is the use of allowing even a weakly tree to make in summer wood that is to be cut away in winter? Roots are formed in strict proportion to top growth, and when the growths of the weakly tree, which have been the means

of its establishing itself the first summer, are removed after the leaves fall, the roots will be there to induce a good and perhaps fruitful growth the second year. Summer pruning or shortening back is often done too soon. With some, neither locality, weather, nor soil is considered, a certain day in a certain month, often in June, being the one on which they commence summer shortening their fruit trees. Even in the south of England it is not wise, as a rule, to proceed with summer pruning until July even in hot summers, from the middle to the end of it being quite soon enough in wet, sunless ones. I saw only this season a lot of wall and espalier Apples and Pears growing in a midland garden in a strong, clayey loam that received their first summer pruning in June, rapid growth necessitating a second one in July and a third in August. Thus the trees were induced to grow on too late in the season, many of the lower eyes starting, which, had the trees been let alone till the beginning of August the first time, would never have moved at all. This treatment is all against the formation of bloom-spurs and tends to grossness generally. The barrenness of espalier and wall trees is frequently attributed to the soil or season, when a crowded state of wood and foliage is the real cause. Many who are careful to prune in the orthodox fashion seldom think of limiting the number of spurs so as to permit of the ingress of a minimum amount of sunshine and light. In removing these, however, it should be done piecemeal, say half one year and the rest the next. The best plan is never to allow too many spurs to form from the outset. Root-pruning likewise is often done in a haphazard manner, young trees being allowed to form strong tap roots several years in succession, the whole of these being then severed at one time, to the detriment of the tree. Strong young trees should be lifted and root-pruned the first autumn or winter after being planted if growth is gross, the remaining roots being laid in very near the surface. It is not safe to rigidly root-prune all round in one year old Pear or Apple trees which have gone down into the subsoil, the safest way being to do half the roots one year and the remaining half the following. If, however, stations consisting of slates or tiles were placed beneath trees at planting time, especially in strong, cold soils, the necessity for root-pruning would be reduced to a minimum, and would be more easily accomplished if necessary.

JOHN CRAWFORD.

**Pear Magname.**—If this Pear proves to be as good in flavour as it is handsome, it will indeed be a grand addition to the list of October ripening varieties. Were it not known that it is a seedling from Louise Bonne, its parentage would at once be stated to be so, as the fruits carry the markings peculiar to that variety, although in not quite such a pronounced form, also in the crimson flush on the exposed side of the fruits. I planted several trees two years ago which are carrying a few fine fruits this season. As a cordon on the Quince stock it is a healthy, vigorous grower, and if the flavour should prove to be good I shall certainly give it a trial as a bush tree in the open garden.—A. W.

**Pear Backhouse's Beurre.**—A further acquaintance with this variety has led to its being placed in the front rank of September Pears, so exceptionally good has it proved this season. The fruits have been extra large and of first-rate quality, the flesh being melting, juicy, and richly flavoured. In appearance the fruit resembles that grand Pear B. d'Amanlis, but it grows to a larger size, and of the two I prefer the flavour of Backhouse's Beurre. The tree has very distinct foliage, and when comparing the leaves with those of other varieties

recently I found them to more closely resemble those of the old stewing Pear Vicar of Winkfield than any other. The wood is also very bright and clean looking, and growth is sufficiently robust without being gross. As a cordon on the Quince it is first-rate, and crops heavily. Altogether, I look upon Backhouse's Beurre as being a fine addition to the list of September Pears, and of those which have been added to the collection in recent years none has given me greater satisfaction.—A. W.

**Thinning late Grapes.**—While summer Grapes are often thinned to such an extent that the bunches sprawl about when laid on the table, late winter varieties are often under-thinned, with the result that many of the largest and best bunches are spoiled by the berries decaying. In modern-built, tightly-glazed vineries very liberal thinning is not so imperative, but where there is the least liability to drip, leaving the bunches the least too thick is very risky, to say the least. Many gardeners—and I think rightly, too—like to thin each bunch so that each berry stands clear of the other, such being easily examined in bad winter weather, any mouldy berry being then detached. It is astonishing how quickly a bunch becomes a mass of mould, the worst cases being when an inside berry decays first, gradually working outward through the rest. The mischief is not then discovered till too late. In thinning late Grapes, all inside berries should be removed if possible. Of course much depends on inside management during the winter months, as where careless treatment is given, loss through damp is sure to occur even in the best constructed house.—GROWER.

### SHORT NOTES.—FRUIT.

**Scarcity of Doyenne du Commerce Pear.**—My sympathy is with Mr. Wythes in the loss of his crop of this most excellent Pear. I have a good crop on trees on south and west aspects. I do not expect Pears to bear every year, and this variety is no exception. The tree on the west aspect, however, bore a good crop last year. I can do little with it in the open.—J. TAYLOR, *Hardwicke Grange.*

**Pear Triomphe de Vienne.**—I am much surprised by "C. C. H.'s" encomiums on this variety (p. 361), for with me it is not merely flavourless, but downright nasty. The tree is pretty healthy, growing and bearing well. This year, however, it has failed to crop, which is rather a relief, as I do not know what use to make of such detestable fruit. Perhaps if Triomphe de Vienne does so well in the midlands, it may require a cool climate to develop its good qualities (?). I have it planted in a very warm and sunny corner.—SOUTH OXON.

**Boiling water for yellows in Peaches.**—An Early Crawford Peach tree in the western part of Rochester, N.Y., says the *Democrat and Chronicle*, has borne three bushels of fine fruit. Two years ago the tree was smitten with the yellows, and the owner thought it was doomed, but, following the advice of a friend who had tried the remedy, he poured boiling water on the trunk and branches and threw it on the upper limbs, repeating the operation four or five times at intervals of five or six days. New growth soon started, and the tree was shortly covered with green and healthy foliage.

**Solanum jasminoides.**—I saw when recently at Bieton, Devonshire, this beautiful climber doing well outdoors. On a south aspect it is quite hardy. That is too much to expect of it in Surrey, but were plants grown on in pots and then planted out against warm positions in June, it is possible that success might attend upon that effort. It is a most graceful and beautiful plant. The finest one I have seen anywhere was at Cricket St. Thomas. Lord Bridport's place at Chard, where it grows with wonderful luxuriance on the back wall and roof of a glass corridor. This plant was put there six years ago, and now it covers an area of 40 feet long by several wide. It was indeed a beautiful specimen and showed how finely it does in a cool house.—A. D.

## TREES AND SHRUBS.

## THE WISTARIAS.

No Wistaria is more beautiful than the familiar *W. sinensis*, which flowered so splendidly last spring. There are others, as *W. multijuga* and the white *W. sinensis alba*, but the former, whilst having longer racemes of the same pleasing colour as *W. sinensis*, is not very free blooming. The white variety of *W. sinensis* is very pleasing, the flowers being pure white, but it is unfortunately too tender for general planting. We have received the accompanying note about the Wistaria shown in the illustration:—

I send you a photograph (taken on the 18th of May) of a very fine Wistaria in full bloom, growing on the house of a market gardener in this village. The tree covers a space of wall 63 feet by 14 feet, and being on the side of a high road, has attracted much attention and admiration this year.—R. C. LYNCH BLOSSE, *Stinchcombe Vicarage, Dursley.*

**Cratægus Crus-galli.**—A fine tree of the oval-leaved form of this covered with clusters of bright scarlet fruits and with leaves that were changing to all kinds of autumn tints, from yellow to scarlet and bronze, is very effective at Kew just now, and, taken from all points of view, it appears to be one of the best of trees for effective planting. Another very effective tree is *Pyrus baccata*, of which there is a large healthy specimen not far from the Palm house. This has a full crop of brilliant red crabs, each about the size of an ordinary Cherry.—J. C. T.

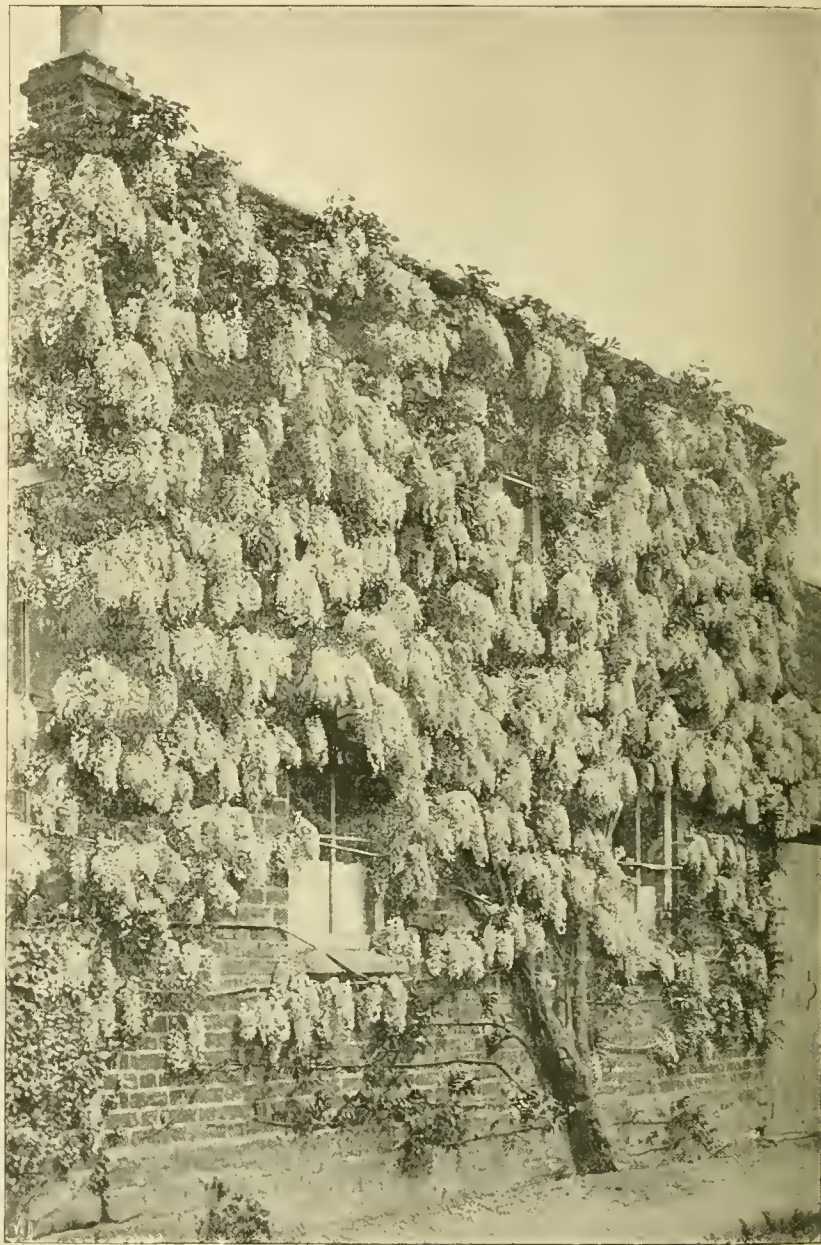
**Hydrangea paniculata.**—Reference was recently made in THE GARDEN to the fine display this plant was making at Kew. This reminded me of another brave show I saw in the pleasure grounds at Gunton. Some of the trusses would compare for dimensions with those mentioned by the writer in question. Had the flower-stems been supported by sticks, the effect would to a great extent have been spoiled, a too stiff and formal appearance being the result, but as seen at Gunton the trusses were allowed to fall about naturally, yet the stems supporting them were sufficiently stout to keep them from bending near enough to the ground to get splashed in wet weather. On a well-kept lawn the group had a very fine effect.—C. C. H.

**Hamamelis virginica.**—The bright weather we have experienced of late seems to have been particularly favourable to the flowering of this North American Witch Hazel, as in some places it has been almost as showy as its Japanese relatives, *H. arborea* and *H. japonica*, are early in the year. The species under notice, *H. virginica*, forms an irregularly-shaped bush, clothed rather densely with deep green leaves, which hide many of the curious, yet pretty blossoms. They are of a singular starry shape, with narrow twisted petals of a bright yellow colour. Generally the flowers open in an irregular manner, but such is not the case this year, and the plant is certainly far more conspicuous in this way than when a succession is kept up, as the blossoms are not sufficiently showy to give much of a display unless they are freely produced.—T.

**Rhus cotinoides.**—During a recent visit to Kew the brightest bit of autumn leafage that was observed among the hardy trees and shrubs was furnished by a few plants of this *Rhus*, which were conspicuous for a very long distance owing to the decaying leaves being of a vivid yellowish scarlet tint. The foliage was not of one uniform colour, as in some leaves the yellow predominated and others were quite scarlet. From its great beauty at this time of the year one might reasonably have expected this *Rhus* to be pretty generally met with, instead of which it is very rarely seen, and good plants of it are difficult to obtain. It is a native of North America, having been first

discovered by Nuttall as a large shrub on the banks of the Grand River, a branch of the Arkansas, in the Indian Territory, in 1819. It is said in America to attain to the dimensions of a tree, with a trunk 8 inches to a foot in diameter and a height of 30 feet. The leaves are in shape a good deal like those of the Venetian Sumach (*Rhus Cotinus*), but larger, while the plant is less spreading than in the better-known kind. Beside the above two many other species of *Rhus* are remarkable for the bright tints of their decaying foliage, notably *Rhus glabra*, whose pinnate

rich blue colour in dark, peaty soil, but only some 30 yards distant, where the soil is stiff and has in it strong loam, the flowers keep of the typical pink colour. All the plants are in the sun. Mr Miller mentioned that the longer the plants remained untouched the more the blue developed. Some planted twelve years were but just becoming blue in colour. There is no attempt to introduce artificial aid. At Basing Park I saw last year numerous small plants in pots from spruce cuttings carrying fine heads of blue flowers that the gardener informed me were produced by using



*Wistaria sinensis* in a Gloucestershire village.

leaves are at times much flushed with scarlet and yellow, and *R. Toxicodendron* (the Poison Ivy of the United States), which is of a vigorous climbing habit of growth. This species also occurs in Japan, and is often met with under the name of *Ampelopsis japonica*. The sturdy-growing *R. Osbecki* is another bright-tinted kind, and so are *Rhus venenata*, from the United States, and *R. succedanea*, a native of China and Japan.—H. P.

**Blue Hydrangeas.**—At Ruxley Lodge, Esher, *Hydrangea Hortensia* produces blooms of a

dissolved alum in watering: that may have been the case or not. Evidently, whether the blue colour is due to iron or other constituents in the soil, it seems to be furnished naturally in many places, and is usually found in boggy or black soils.—A. D.

**The Scarlet Oak (*Quercus coccinea*).**—The autumn tint of the foliage of this tree is very rich. The leaves are more deeply cut than those of the common Oak, and they take on this rich colour early in autumn some weeks before the

all. They are each from 6 inches to 8 inches long, and easily distinguished from those of most other species by their deep shining green in summer. Many beautiful arrangements of foliage of this class may now be made in the house, that of the amachis in variety, Ampelopsis and Berberis being especially beautiful in the combinations of rich brown, green and scarlet.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

OCTOBER 12.

THERE was a full display again on the above date, better even than one could have expected when it is taken into consideration that another traction was afforded at the National Chrysanthemum Society's October show. The Drill Hall could possibly have contained more Chrysanthemums had there not been any counter-traction, but, as it was, there was a highly edible exhibit of first-class blooms from Syon, which were set up in a very tasteful manner by Mr. Wythes, who does not evidently believe in the orthodox methods of staging. Michaelmas daisies made a brave show from Chelsea and from denham, the former being staged in pots and cupped as growing plants, by which means the effect was greatly enhanced. The latter consisted of the finest kinds in the best possible condition, the arrangement being likewise good. Late roses, still fresh and bright, were to be seen, but Dahlias were absent, as we might expect after the rather severe frosts. Of other plants, the most noteworthy exhibits were a finely-grown collection of Begonia Gloire de Lorraine, models of good culture and free-flowering, and a choice collection of small, well-coloured Crotons. Orchids were not numerous, but fruit was fully represented by Pears and Apples from Barham Court and elsewhere. There was also very good competition for the flavour prizes for Apples and Pears, but no new kind was able to beat the choicest of the best older varieties.

#### Orchid Committee.

Awards of merit were given to—

**VANDA CERULEA ROCHFORDIANA.**—A distinct and lovely variety with nearly white sepals and petals, the lip rosy purple, the upper portion of the raised ridges of the lip pure white. The plant cried a raceme of four flowers. From Mr. T. Lefford, Turnford Hall Nurseries, Herts.

**VANDA MOOREI.**—A supposed natural hybrid between *V. cerulea* and *V. Kimballiana*. The sepals and petals are nearly white, the lip a deep violet-blue, with a white line running through the centre towards the base. The habit of growth is intermediate characters, and there can be little doubt of its origin. From Mr. J. W. Moore, Lion Place, Bradford.

**ODONTOGLOSSUM GRANDE** (Pitt's variety).—Sepals and petals bright yellow, the usual brown bars being entirely suppressed by deep orange-yellow. The lip is nearly white, with yellow spots and bars in the centre. The plant carried five spikes of four flowers each. From Mr. T. P. Stamford Hill.

**ODONTOPETALUM JORISIANUM.**—A pretty form with pale green sepals and petals, barred with deep brown, the lip white, heavily fringed at the margin, the upper lobes canary-yellow. It has several large reddish-brown lines at the base. From Mr. W. Cobb, Tunbridge Wells.

**LILIA PRESTANS** (Low's variety).—This form is superior to the variety certificated as *L. prestans* (Gatton Park variety). The sepals and petals are larger, but similar in colour; the lip much larger and with a broader band of blue on the front lobe, which is also much deeper in colour. From Messrs. Hugh Low and Co.

Statistical certificates were awarded to *Dendrobium taurinum* var. *ambinense*, a distinct form, with yellowish brown sepals and petals, the lip

brown, with yellow lines at the base (from Messrs. J. Veitch and Sons, King's Road, Chelsea); and *Cryptophoranthus Dayanus*, represented by a large finely-flowered plant of this well-known Orchid. From Sir T. Lawrence, Burford Lodge, Dorking.

Messrs. J. Veitch and Sons sent a large and interesting group, prominent in which were some remarkable forms, finely flowered, of *Cattleya labiata autumnalis*, good forms of *C. Bowringiana* and a fine form of *C. bicolor* with five spikes of flowers. Among the hybrid *Cattleyas*, *C. Chloris*, *C. Eros* and *C. Minucia* (*C. Loddigesi* × *C. Warszewiczii*), intermediate in character between the two species, were noteworthy. Amongst the *Laelio-Cattleyas* were a fine *L.-C. Pallas*, good forms of *L.-C. Nysi* and *L.-C. Endora superba*, a dark form, with larger flowers than the type. Among the numerous forms of *Cypripediums* was a good form of *C. insigne Sanderæ*. In *C. Arete* (*C. Spicerianum* × *C. concolor*) the dorsal sepal is white, shading to greenish yellow at the base, spotted with purple, and having the characteristic purple band down the centre, the lip and petals yellow, spotted and suffused with purple. *Oncidium tigrinum* and *O. phymatochilum* were represented by large, well-flowered specimens. A silver-gilt Flora medal was awarded. Messrs. H. Low and Co. sent a neat and interesting group. Prominent among these were fine forms of *Vanda cerulea*, *Cattleya labiata*, finely-flowered plants of *C. Loddigesi* and *C. Harrisonæ violacea*, a good form of *C. Dewiana aurea*, and a grand plant of *Oncidium ornithorrhynchum album* with 9 spikes of flower. Amongst the numerous *Cypripediums* were a very dark form of *C. William Lloyd* (*C. bellatulum* × *C. Swianum*), *C. insigne Laura Kimball*, a yellow form with a bronze tint over the petals and lip, and *C. i. Millie Dow*, another yellow form with prominent spottings on the dorsal sepal. Numerous fine forms of *Odontoglossum crispum* were also included (silver Flora medal). Messrs. B. S. Williams and Son were awarded a silver Banksian medal for a neat group consisting of fine forms of *Cattleya labiata*, several forms of *Cypripedium Pitcherianum* (Williams' variety), good forms of *C. ananthum*, and a new hybrid between *C. Harrisonianum superbum* and *C. Sallieri aureum*, the dorsal sepal pale green, suffused and heavily spotted with brown. A good form of *Pescatorea Lehmanni* was also included. Messrs. F. Sander and Co. sent a small group consisting principally of finely-flowered *Cattleya labiata*, the most distinct one amongst them being a variety with nearly white sepals and petals, the lip white with a crimson blotch in the centre, the side lobes white suffused with rose, lined with crimson and yellow at the base. Good forms of *Cattleya Bowringiana* and *Cypripedium Leeanum* were also included.

Mr. R. J. Measures, Cambridge Lodge, Camberwell, was awarded a silver Flora medal for an interesting group consisting principally of forms of *Cattleya labiata*, the best being *Cattleya labiata* (*R. J. Measures' variety*), which received a first-class certificate last year. The sepals and petals are white, lip white, with numerous lilac veins down the centre. *C. labiata superba* is one of the darkest forms we have seen, the sepals and petals large and dark in colour, the lip of fine form and substance, heavily fringed, and deep crimson-purple on the front lobe. *Laelio-Cattleya Sallieri* has the sepals and petals delicate rose, lip rose-purple in front, shading to a lighter colour and yellow in the throat. The plant carried a raceme of five flowers. A grand form of *Laelia elegans Schilleriana* (the crimson-purple of the lip being very prominent) and a good plant (finely flowered) of *Dendrobium anreum* were also shown. Amongst numerous forms of *Cypripediums* were the original plant of *C. Chapmani*, *C. tessellatum porphyreum* with two flowers on the spike, and a new hybrid named *C. calloso-Mastersianum*, raised from the two species indicated in the name. Mr. C. J. Ingram sent *Cattleya Eclipse* (*C. maxima* × *C. Skinneri*), *Laelio-Cattleya odorata* (*C. Eldorado* × *L. xanthina*), *L.-C. Firefly* and *L.-C. Epicasta*

Mr. J. W. Temple, Leywood, Tunbridge Wells, sent *Laelio-Cattleya* (Temple's var.), the sepals and petals pale rose, lip rose, shading to white at the base, the centre lined and suffused with rose. Mr. Bradshaw, The Grange, Southgate, sent *Cattleya Mantini nobilior*, one of the best forms we have seen.

#### Floral Committee.

Awards of merit were made to—

**VERONICA SILVER STAR.**—A very distinct and attractive variety, and one which bids fair to be valuable as a decorative plant, especially for marginal lines or groups. The growth is exceedingly dwarf and compact, whilst the foliage, by reason of its distinct variegation, makes it a showy plant. The predominating colours are silvery white and creamy yellow, the silvery suffusion appearing upon a pale green ground. From Messrs. J. Veitch and Sons, Chelsea, S.W.

**NANDINA DOMESTICA.**—Not a new plant, having been introduced as far back as 1804, but one none the less worthy of the recognition it received. The examples shown were quite dwarf and compact, but it grows to a fairly good height. The prevailing colour in its autumnal tints was a bright red, which makes it a very showy subject. The leaflets possess a deal of consistency and should remain for a considerable time ere they fall. Of its hardiness we are not certain. From Messrs. J. Veitch and Sons.

**MARANTA PICTA.**—A dwarf-growing variety in the way of *M. Warszewiczii* to a certain extent, and one which possibly throws up its flowers in the same attractive manner. The foliage is somewhat narrow and pointed, the ground colour a dark green with pale olive-green featherings, and the reverse of a pale chocolate hue. From Mr. Wm. Bull, King's Road, Chelsea.

**CHRYSANTHEMUM MRS. WINGFIELD.**—Of this several very well-grown plants were shown, dwarf in habit of growth and with flowers of medium size, which in colour were a blush-pink, shading to white with age. From Mrs. Wingfield, Amphil (gardener, Mr. Empson).

**CHRYSANTHEMUM MME. G. BRUANT** (large-flowered Jap.), in which the petals are of considerable length, drooping gracefully, thus giving the blooms a pretty effect. The colour is a lilac-rose towards the tips and white (or nearly so) at the base. From Messrs. Pearson and Son, Chilwell Nurseries, Nottingham.

**BEGONIA (TUBEROUS)** (for strain).—In this the distinctive feature is the creasing on each petal, thus making a singular, but very pretty contrast to the ordinary type of singles; this creasing is most pronounced and the variation of colour good. From Sir Trevor Lawrence, Bt. (gardener, Mr. Bain).

A surprisingly large number of exhibits was brought together on this occasion, the chief things being Michaelmas Daisies and Chrysanthemums. A very fine collection of Asters came from Mr. E. Beckett, gardener to Lord Aldenham, Elstree, Herts, containing upwards of eighty bunches of really well-grown material. A few of the finest varieties represented were *A. cordifolius major*, *A. Novi-Belgii Proserpine*, *A. levigatus*, *A. Amellus bessarabicus*, *A. ericoides elegans*, *A. N.-B. Nancy*, *A. versicolor Themis*, *A. N.-B. Harpur-Crewe*, *A. puniceus pulcherrimus*, *A. vimineus*, *A. Madonna*, *A. Amellus*, *A. Novæ-Angliæ roseus*, *A. Linosyris*, the curious but very effective yellow variety, and *A. N.-B. Top Sawyer*, a large and very beautiful mauve flower (silver-gilt Banksian medal). A small but very excellent collection of Asters was staged by Mr. Wm. Potten, Camden Nurseries, Cranbrook, Kent. The best bunches were *A. N.-A. pulchellus*, *A. laevis Ariadne*, *A. cordifolius Diana*, *A. N.-A. ruber*, and *A. laevis formosissimus*. Mr. H. Deverill, of Banbury, also put up a collection of Asters, comprising good bunches of *A. N.-B. ruber*, *A. Amellus*, *A. Amellus Riverslea*, *A. acris*, *A. Robert Parker*, and *Boltonia asteroides* (silver Banksian medal). A magnificent group of Asters in pots, shown by Messrs. Veitch and Sons, Chelsea, contained good examples of *Aster polyphyllus*, a pretty and

free-flowering white; A. N.-B. Pluto, A. ericoides, A. N.-B. Arcturus, A. formosissimus, A. horizontalis, A. vimineus, A. Amellus bess-arabicus, and A. Shorti (silver-gilt Banksian medal). Excellent Asters and Sunflowers were also shown by Messrs. Paul and Son, Cheshunt. The chief feature of their exhibit was, however, the charming collection of Roses, which included Caroline Testout, Gustave Regis, Marquise de Salisbury, Bridesmaid, and Souvenir d'un Ami. Some handsomely berried Pernettyas were also shown (silver-gilt Banksian medal). A very beautiful group of cut Roses, most artistically staged and consisting chiefly of button-hole varieties, was shown by Mr. G. Prince, Oxford. The colours were very rich and admirably disposed, and nearly every bloom was in good condition (silver Banksian medal). Messrs. Cutbush and Son were represented by a pretty group of *Pyraeantha Lælandi*, freely fruited Orange trees, and thickly berried plants of *Skimmia japonica*.

Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, staged a very pretty group of cut Chrysanthemums, the blooms large, well developed, and in fine condition, and very tastefully staged in a ground-work of Maiden-hair Fern. Some of the best varieties were Mlle. Thérèse Rey, Louise, M. Ch. Molin, W. H. Fowler, John Lightfoot, Comte de Germiny, Louis Boehmer, Lady Selborne, Lady Randolph, William Seward, Elaine, and W. H. Lincoln (silver Flora medal). A very delightful exhibit was that of Mr. H. B. May, of Edmonton, consisting of some thirty plants of the lovely pink *Begonia Gloire de Lorraine*, one of the most useful and beautiful of the winter-flowering Begonias. Every plant was finely grown and flowering profusely. They were very symmetrical in growth, and all remarkably even in quality. The effect of this mass of brilliant colour was very striking, and called forth great admiration (silver Flora medal). A small collection of cut Chrysanthemums came from Mr. Robert Owen, Maidenhead. Messrs. Veitch and Sons had examples of *Caryopteris mastacanthus*, brilliantly tinted plants of *Vitis Coignetia*, *Vitis vinifera purpurea*, and well-berried boughs of *Crataegus orientalis*. Messrs. Hawkins and Bennett had plants of a new double scarlet *Geranium Duke of Fife*, and Mr. Godfrey, of Exmouth, boxes of very fine cut Chrysanthemums. Sixteen fine bunches of Violet The Czar came from Mr. Harris, of Chippenham, and a group of plants of *Begonia Gloire de Lorraine* from Messrs. Peed and Sons. A group of very good Crotons, well grown and finely finished, was staged by Messrs. B. S. Williams and Son, Upper Holloway (silver Banksian medal).

#### Fruit Committee.

Fruit on this occasion filled a goodly portion of the building and was shown in splendid condition, notably the gold medal collection from Barham Court. Seedling Apples and Pears were numerous and above the usual quality.

Awards of merit were given to—

**MELON CROXTETH JUBILEE.**—A medium-sized, deeply ribbed and slightly netted fruit; flesh bright scarlet, of good depth and fine flavour for so late in the season. From Mr. B. Barkham, Croxteth Hall Gardens, Liverpool.

**PEAR DIRECTEUR HARDY.**—A very handsome medium-sized fruit; skin yellow, bronzy red on the sunny side. It is of first-rate flavour and a valuable addition to the October Pears. From Messrs. Bunyard and Co., The Royal Nurseries, Maidstone.

**APPLE JAS. GRIEVE.**—A medium-sized fruit, not unlike a large Cox's Orange; skin yellow, flushed with bright crimson. It is of splendid quality, and a valuable addition to the dessert at this season. From Messrs. Bunyard and Co.

Probably the finest 100 dishes of Apples and Pears ever staged in the Drill Hall were put up by Mr. Woodward, gardener to Mr. Roger Leigh, Barham Court, near Maidstone, on this occasion, as it consisted of the cream of the Crystal Palace fruits which had taken prizes in their several classes. The fruits were now staged in long rows

on a wide table. Apples were about half of the exhibit. Such kinds as Yorkshire Beauty, Peasgood's Nonsuch, Stone's, Lane's Prince Albert, Potts' Seedling, and Warner's King were enormous fruits, and few people have ever seen Tyler's Kernel, The Queen, Alexander, Lady Henniker, Washington, Mère de Ménage, and Cox's Pomona so large and highly coloured. Of dessert kinds only a few can be noted, such as Ribston, immense—in fact, too large for dessert; Margil, Cox's Orange, Wealthy, Mother, Allington Pippin, a new fruit of great merit of the Golden Reinette type, and Adams' Pearmain. Pears were equally good, Princess, Magrate, Conference, Marie Benoist, Beurré Ballet, B. Superfin, B. Diel, and B. Hardy being the best. There was a grand dish of President d'Osmonville. Doyenné du Comice was also fine, the collection well meriting the gold Banksian medal awarded. With such a collection as the one named as a standpoint to judge from other collections appeared poor, but exception must be made in the case of that sent by Mr. Offer, gardener to Mr. John Warren, Handcross Park, Sussex. Here was remarkably good fruit, some of the dessert Apples being superior in colour and equal in size to Mr. Woodward's. Some sixty dishes were staged, Pears predominating. There were very fine examples of Doyenné du Comice, Pitmaston, Beurré Diel, Beurré Hardy, Beurré Bosc, and Doyenné Boussoch, fine Marie Louise and the largest Gansel's Bergamot we have seen, with Princess, Magrate and Nouvelle Fulvie. Apples were notable for their grand colour. Cellini was very rich, also Cox's Pomona and Peasgood's Nonsuch. Dessert varieties, such as Cox's Orange, Fearn's Pippin, Duchess' Favourite, Duchess of Gloucester, Calvilles in variety, and Russets, made a splendid collection (silver Knightian medal). Seventy dishes of fruit were staged by Mr. Rickwood, gardener to Lady Freake, Fulwell Park, Twickenham. Of the Pears, Beurré Diel, Beurré Superfin, Beurré Bachelier, Beurré Hardy, Beurré Bosc, Durondeau and Pitmaston were good. Apples, both dessert and cooking, were also good (silver Banksian medal). Many of the visitors would be surprised to see a small collection of fifteen varieties from Mr. J. Easter, gardener to Lord St. Oswald, receive a similar award. The fruits were not large, having been grown in the smoke-begrimed district of Wakefield. This was considered. The dishes of Lane's Prince Albert, Warner's King, Ecklinville, with Blenheim, King of the Pippins, and Cox's Orange were good.

Messrs. Jas. Carter and Co., High Holborn, sent a collection of thirty varieties of Cabbage. Some kinds were specially good. Mein's No. 1 was noteworthy for its compact habit. Ellam's Early is not so good in autumn as for spring use. The older Enfield Market, Little Pixie, and Nonpareil still hold their own as summer varieties. Rainham was a fine type, and Dwarf Nonpareil was very good (silver Knightian medal). The Messrs. Young, Stevenage, Herts, staged a quantity of Gourds of various shapes and colours, but none named. An exhibition of this kind is useless without names (bronze medal). Smaller exhibits were very numerous. Mr. Ross, Welford Park, Newbury, staged several new seedling Apples and Pears, but most of these were reserved for the next meeting, not being sufficiently ripe. The Horticultural College, Swanley, staged bottled fruits of 1896 growth, Cherries, Plums, Gooseberries, Currants, and Raspberries. The fruits were of good quality and colour. A seedling Grape named Edward Lord was sent by Mr. Lord (gardener, Mr. J. Wright), Belmont, Rawtenstall, Lancashire. The berries are large, oval, and not unlike those of Black Morocco in shape, but of distinct flavour. Unfortunately, the colour is bad, skin very thick. Even if distinct the colour is a drawback. Messrs. Wells, Crawley, sent a new Apple not unlike Lane's Prince Albert in shape and colour, but different in quality. It is a very late cooking fruit and good. This the committee asked to see next spring.

The flavour competition for the Veitch prizes brought forth a spirited competition and proved

that a good dish of Thomson's Pear can hold its own with Comice. Mr. Powell, Isington House, Dorset, was a good first with the variety named second, the Rev. H. Golding Palmer, Holme Park, Berks, with good Marie Louise. There were nine dishes staged, the varieties being Beurré Bosc, B. Superfin, Seckle, and Doyenné du Comice. There was the same number of Apples and of course Cox's Orange will be difficult to beat for the next few meetings. Some excellent dishes were staged, Mr. Woodward being first with this variety, and Mr. Powell second with Ribston Pippin. The other varieties staged were Cravenstein, American Mother, and Charlestown Pippin.

The members of the floral committee on Monday, the 4th inst., examined for the second time the early-flowering Chrysanthemums growing at Chiswick. The trial is certainly a most satisfactory one, many excellent sorts hitherto little known being brought into prominence. The majority of the pompon varieties were past their best, the bulk of the display being made by very interesting lot of Japanese sorts, showing pleasing diversity both in colour and form. The plants have been grown quite naturally, no dibbudding or stopping having taken place, and on just a stout stake used for the purpose of supporting the taller growing sorts and an others of abnormal size needing some support of the kind. The trial should make known the excellent qualities of the early and semi-early flowering Chrysanthemums for making a bright display in the open border, when many other autumn-flowering plants have succumbed to the first severe frost. The plants vary in height from about 2 feet to 5 feet, the majority of the sort being about 3 feet in height. Three marks were accorded to each of the following varieties:—

**EDIE WRIGHT.**—This is a Japanese variety with incurving florets of good width. Colour rosy-pink, free-flowering, and of strong constitution; height from 2½ feet to 3 feet. From Messrs. Dobbie and Co., Rothesay, N.B., and Mr. H. Jones, Lewisham, S.E.

**LA VIERGE.**—Compact habit of growth, racemes exceeding 18 inches in height. Flowers white slightly tinted blush, of Japanese form and freely produced. This sort would have been better developed a week later. From Messrs. Dobbie and Co.

**ALICE BUTCHER.**—This, one of the prettiest of the pompon flowers, is a reddish orange spec from Lyon, a rosy purple flower. It attains height of about 2½ feet. From Messrs. Dobbie and Co. and Messrs. Barr and Sons.

**ORANGE CHILD.**—A Japanese variety raised by the late Mr. W. Piercy, and very useful as a de yellow flower for the open at this season. Some of the flowers are tinted orange. It is a strong growing plant from 2½ feet to 3 feet high. From Messrs. Dobbie and Co.

**MME. EDUARD LEFORT.**—In this the flowers are neatly notched at the ends, giving the quite a fimbriated appearance. Colour bronzy gold, slightly veined crimson; height about 18 inches. From Mr. W. H. Divers, Belvoir Castle Gardens, and Messrs. Barr and Sons.

**LADY FITZWYGRAM.**—This was in capital condition and profusely flowered. The blooms are pure white, of Japanese form. It grows from 18 inches to 2 feet high. From Messrs. Cannell and Sons, Swanley, and Mr. W. Divers.

**IVY STARK.**—This, one of the very best sorts recently introduced, is a Japanese variety, raised from seed saved in this country. The flowers very much resemble those of the popular autumn season variety Source d'Or. The earliest buds were developing flowers of an orange-yellow colour, while the later flowers were of a rich shade of the same colour. Height about 3 feet. From Mr. H. J. Jones.

**BRONZE PRINCE.**—Another English seedling of Japanese form, with florets of medium width colour a pleasing shade of bronzy salmon, the flowers being very rich in colour. Height about 2½ feet. From Mr. H. J. Jones.

**Mlle. Guindeau.**—Another Japanese flower, of deep pink, paling with age. It is free-fering and distinct. From Mr. H. J. Jones.

**BERTA.**—This is a bright little pompon flower of golden yellow colour, and borne freely on long stalks. Height about 2 feet. From Mr. H. Divers and Messrs. Barr and Sons.

**MARTINUS.**—This was specially noticeable for its nice bushy habit of growth. The colour may be described as pale pink, the centre florets edged white. The flower belongs to the pompon section. From Messrs. Barr and Sons.

**HARVEST HOME.**—This popular market variety is past its best. It is the earliest of the crimson and golden yellow flowers and blossoms somewhat fully. It is of Japanese form, with a spare habit of growth, and in height from 2½ feet to 3 feet. From Messrs. Barr and Sons.

**BLANCHE COLOMB.**—This, of stiff Japanese form, has creamy white blossoms; height from 18 inches to 2 feet. From Messrs. Barr and Sons.

#### ZONAL PELARGONIUMS.

At the same meeting the following zonal Pelargoniums received a similar recognition:—

**REV. H. H. D'OMBRAIN.**—A plant bearing splendid trusses of rich salmon colour, with well-defined individual pips.

**ULES LEMAITRE.**—A huge truss of rich crimson-scarlet, with large pips of good form and substance. From Mons. Lemoine, Nancy, France.

**ADOLPHE BRISSON.**—A pretty flower and a distinct advance upon the fancy types of the zonal pelargonium. Colour rich carmine-pink, having a white blotch at the base of the two upper florets. From Mons. Lemoine.

### UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

#### THE ANNUAL DINNER.

The annual dinner of this benefit society, reserved entirely to gardeners, was held at the Albion Restaurant on Tuesday last. Although there were several horticultural engagements fixed for the same evening, the Venetian room was crowded, about 120 guests being present. We have never been present at a dinner of this society in which the proceedings passed off with greater zest.

The chair was taken by Mr. H. B. May, who was supported by Mr. Nutting, Mr. G. Bunyard, Mr. James H. Veitch, Mr. Harry Laing, Mr. G. Laram, Mr. H. Williams, Mr. Peter Kay, Mr. S. T. Wright, Mr. Walker, Mr. Wythes and many others.

After the usual loyal toasts, the chairman proposed "Success to the United Horticultural Benefit and Provident Society." In the course of his speech he said: "This society has for its motto 'Unity is strength,' but its pioneers, mindful of the stability is not obtained by numbers alone, have raised it upon an enduring basis of self-help. The society is conducted by gardeners for the welfare of gardeners, and so great is my admiration for its objects, and particularly its methods, that I venture to think it is unsurpassed, if indeed it is equalled, by any similar institution in the kingdom. The advantages it offers its members, especially those advanced in age, are certainly most liberal. The society is indeed a happy combination of a benefit society and savings bank."

It may be useful to point out the following information recorded by the chairman, as likely to promote increased membership. He said: "The members are of two grades, those on the higher scale paying 9d. and the lower 6d. per week to the sick and deposit fund; 3s. and 2s. a year to the benevolent fund, and 2s. 6d. a year by each member to the management fund. Members are entitled to 18s. and 12s. a week sick pay respectively for a period of twenty-six weeks, and 9s. and 6s. for a further period of twenty-six weeks, and may then be transferred to the benevolent fund, receiving such weekly payment as the committee deem advisable. The balance to the credit

of the sick fund, after deducting payments to members, is annually divided *pro rata* and placed to the credit of each member. This sum, with compound interest, is carried forward until he reaches the age of seventy, when he is entitled to withdraw the amount standing to his credit. A member, too, who has allowed his subscription to lapse does not forfeit the amount, but is entitled, on reaching the age of sixty, to withdraw the sum standing to his credit at the time of his default."

Mr. May said that the society had made decided progress, sixty-three new members having joined since the last annual dinner, the total number on the books being 684.

Mr. Hudson (the treasurer of the society) responded, and urged its claims strongly upon gardeners who had not joined. He mentioned that only the previous evening a sum of 30s. was voted from the convalescent fund to enable the member to stay a week or two at the seaside.

The toast of "The Honorary and Life Members and Visitors" was proposed by Mr. Nathan Cole, who gave a short history of the early days of the society. This was responded to in an excellent speech by Mr. George Bunyard. The health of "The Chairman" was proposed by Mr. Peter Kay. The toast of "Kindred Institutions" was proposed by Mr. W. J. Nutting, and Mr. G. Ingram (secretary of the Gardeners' Royal Benevolent Institution) responded. Mr. G. W. Cummins also spoke to this toast.

The remaining toast was "The Press," proposed by Mr. James H. Veitch, and responded to by Mr. Curtis. Mr. W. Collins (secretary of the United Horticultural Benefit Society) proposed thanks to donors of fruits and flowers, Messrs. H. Williams, J. Laing, H. Cannell and a few well-known gardeners having kindly given liberally to make the tables gay. Miss Hudson decorated the tables.

We can add little more about this society. It should appeal to every gardener in the land, in whatever circumstances, and the wish expressed by the treasurer, that the roll of members should soon reach 1000, we hope will soon be realised.

**National Chrysanthemum Society.**—Owing to want of space, we have been compelled to hold over the report of the show held on the 12th inst. and two following days till next week.

### NOTES OF THE WEEK.

**Aster ericoides.**—As implied in the specific name, this is the Heath-like Starwort, and certainly it deserves such distinction. The small pure white blossoms are produced in the most elegant sprays.

**Aster Amellus Riverslea.**—Apparently a selected seedling form, and differing from the majority of the Amellus varieties in the violet self tone of the ray florets, this being of a more decided shade than is usually seen.

**Jacobinia magnifica.**—Where a good display is required to be maintained in the warm greenhouse this plant should not be overlooked, for its showy heads of pink are most serviceable. By adopting a variety of methods, plants may be had in flower for a long period.

**Violet The Czar.**—When one sees this very handsome Violet in fine condition, it is doubtful whether the much-lauded new kinds are really acquisitions after all. On Tuesday at the Drill Hall some sixteen bunches of this old favourite were shown in splendid condition.

**Chrysanthemum W. H. Fowler.**—This promises to be one of the best yellow kinds, a fact amply illustrated by several splendid blooms at the Drill Hall on Tuesday last from Earl Percy, Syon House (Mr. Wythes, gardener). The flowers are very full to the centre and rich golden yellow.

**Passiflora racemosa.**—This very showy Brazilian species is among the most attractive of

the genus now in flower. The rich scarlet blossoms are produced with great freedom in an intermediate temperature, and, trained loosely to the rafters, the plant is an object of great beauty for weeks in succession.

**Sedum Borderi.**—While there are many inferior species catalogued from year to year, this striking plant rarely finds a place. It is a native of the Pyrenees, flowering quite late in summer and into the autumn months, at which time the heads of crimson-coloured flowers are most effective. It is a capital plant for the rock garden.

**Nerine pudica.**—This is a neat and chaste species, easy of culture and free flowering. The slender spikes bear some eight or more blossoms nearly pure white, with a faint rose streak on the midrib externally. Associated with the more striking species of this genus and where the plants are freely flowered the effect is distinctly pleasing.

**Chrysanthemum Mrs. Wingfield.**—A seedling variety of very dwarf growth, the plants as shown at the Royal Horticultural meeting being under 2 feet high from the pot. Indeed, as a pot plant from a decorative point of view, the variety would appear well suited. The flowers are of medium size, some almost pure white, and others flushed with pink.

**Aster puniceus grandiflorus.**—While the flowers of this are large and numerous and showy for the border or in groups, they are not so useful in a cut state as many, as they are produced in a somewhat cylindrical form, at least on the main spike. In colour the flowers are of a lilac-blush tint. It is a strong and vigorous grower, and does well in deep soil.

**Lilium speciosum eruentum.**—Even after the severe frost this vigorous-growing Lily still expands its richly-coloured flowers. It is a handsome form that should be abundantly grown in gardens, and a great improvement upon the ordinary forms of roseum and rubrum. It is equally good as a pot plant, and where late flowers are desired this should always be found.

**Chrysanthemum Klondyke.**—This promising variety, with deep golden yellow flowers and petals slightly drooping, was exhibited by Mr. Davis at the Aquarium show this week. The flowers are not large, but when seen in sufficient quantity very striking. Of its habit we know nothing, as for some reason the stems were divested of all leafage, and in this way the beauty of the blossoms was lost.

**Gladiolus Raphael Collin.**—This is perhaps one of the finest varieties of the Lemoinei section of these beautiful flowers. In greater part the flowers are of a deep salmon-pink, scarlet-crimson on the lower petal. The spike is large and the flowers numerous. Another very handsome form, also of the Lemoinei type, is Goliath, the flowers slightly hooded and of a purple-wine shade, lightened by a faint white central band.

**Pelargonium Duke of Fife.**—Whether this is any advance on the best double scarlets now in cultivation or not matters but little. It is undoubtedly a most vivid colour, the rather semi-double flowers large and in well disposed heads, and produced on stout stems nearly 10 inches in length. Some fine baskets of it were quite a mass of colour at the Drill Hall this week, when it was shown by Messrs. Hawkins and Bennett.

**Chrysanthemum Etoile d'Or.**—At the present time, when frost has blackened all Dahlias and other tender short-lived things, it is refreshing to see broad patches of this several feet across quite fresh and unharmed. The abundance of its foliage and the number of its soft yellow blossoms render it a most useful plant for the open garden in summer. Groups of old plants yield a surprising amount of flower, and are attractive over a long season.

**Antirrhinum Hendersoni.**—Snapdragons are now largely used in the flower garden, and this is one of the types which is most desirable among the spotted and variegated kinds. All these spotted, variegated and dwarf forms, how-

ever, make us long to see more of the pure distinct self colours which are now found in this family. The beauty of the Snapdragon is lost in the dwarf kinds which are now being largely planted. Mr. John Forbes, of Hawick, has just sent us some spikes of this.

**Begonia Gloire de Lorraine.**—This singularly beautiful and free-flowering kind was exhibited in the most perfect form on Tuesday last by Mr. May, of Edmonton, the plants being as remarkable for their good culture as for their abundant flowering. Though growing in pots only 5 inches in diameter, the plants were about 18 inches high and 15 inches through. These perfect little bushes were most attractive, the two dozen or more plants making a good display amid a setting of various beautiful Ferns.

**Kniphofia Nelsoni.**—In the kind under notice the rare beauty and worth are not in its giant inflorescence or even the vigour of the plant, for in *K. Nelsoni* the growth is less vigorous than in most kinds; at the same time it is so perfectly hardy and so free flowering as to make it well-nigh unique. It is a slender, graceful kind, the long tubular blossoms almost vermilion-orange in tone. Of all the tribe, this slender kind is the most suitable in a cut state, and for brilliancy is not surpassed by any of the more massive and robust forms.

**Kniphofia Woodii.**—This is a very distinct and interesting species from Natal now flowering in the Royal Gardens, Kew. The species is of rather tall and meagre growth, the attenuated inflorescence rising to 6 feet high and freely furnished with blossoms, each some three-quarters of an inch long. In the bud stage these are yellow, but expanded, of a creamy shade, and therefore quite distinct from all else. Unfortunately, its native habitat precludes the idea of its perfect hardiness—a fact that minimises its value considerably so far as British gardens are concerned. In the Cape house it will doubtless prove an acquisition.

**Schizostylis coccinea.**—In those gardens where some attention is paid to this plant in spring and summer the reward will now be forthcoming in the profusion of its vivid scarlet spikes. It is somewhat difficult to fully understand why so useful a subject is so generally either neglected or ignored altogether, as few plants give such a return for the little trouble expended. Planted out in good ground in early spring at a few inches apart, it is surprising what a number can be grown on a few yards, and in rich light soil even the small growths furnish flowering stems by the autumn. At this season it is best to lift and pot them for flowering. In a cut state the spikes are most attractive.

**Outdoor Grapes from Wales.**—I have sent you a box containing three bunches of Grapes cut from the vineyard at Swanbridge. They are typical of the whole crop in that vineyard. The fruit is well coloured, but not so sweet and palatable as usual, which of course is accounted for by cold, wet weather experienced in August and early part of September. The Grapes are juicy and in good condition for wine making. I anticipate making from that vineyard alone about thirty hogsheads of wine that will, I think, not be inferior to that of some of the best seasons. "La vendange" was commenced October 7, and will probably last for four or five days. The Castell Coch vineyard, on account of mildew, is nearly a failure again this year. Despite frequent applications of the Bordeaux mixture and the employment of all the latest continental methods for combating mildew, it still remains unchecked at Castell Coch. The Vines at Swanbridge are entirely free from it. —A. PETTIGREW.

**The weather in West Herts.**—The weather remained warm until the 4th inst., but since then colder conditions have prevailed. During the night preceding the 6th the thermometer exposed on the lawn showed 5° of frost. Notwithstanding

this low reading, neither the petals nor the foliage of any single Dahlias were in any way injured. At 2 feet deep the temperature of the soil is at the present time about seasonable, but at 1 foot deep it is about 2° below the average. On the 29th ult. about half an inch of rain fell during a thunderstorm. Previous to this thunderstorm no measurable quantity of rain water had come through either percolation gauge for more than a week, but since then small measurements have each day been made. There has been a good record of sunshine during the week, and on the third the sun was shining brightly for nine hours. During the past nine days the wind has been mostly very light, the average rate of movement for this period amounting to less than two miles an hour.—E. M., *Berkhamsted*, October 7.

—During the past ten days there has not been a single unseasonably warm day and only three moderately warm nights. On the night preceding the 6th the exposed thermometer showed 5° of frost, but my Dahlias were in no way injured, not a leaf or petal being touched. But with 8° of frost on the following night the upper half of the plants was killed and their flowering ruined for the year. Both nights were equally calm and bright, but on the second there were 3° more frost and the temperature remained at its lowest point for a considerably longer time. The ground at 2 feet deep is now about seasonable in temperature, while at 1 foot deep the reading is only about 1° below the October average for that depth. No rain worth mentioning has fallen since the 2nd, and then the amount registered fell short of a quarter of an inch. The sun shone on an average during the week for four hours a day, and on two days the record exceeded seven hours.—E. M., *Berkhamsted*.

## PUBLIC GARDENS.

**Surplus bedding plants in the London parks.**—Arrangements have been made for the distribution to the public, on the days named, of any surplus bedding plants that may be at the following places: Brockwell Park and Maryon Park, October 16; Myatt's Fields, Peckham Rye Park and Waterlow Park, October 19; Finsbury Park, Meath Gardens, Bethnal Green, Royal Victoria Gardens, North Woolwich and Victoria Park, October 20; Kennington Park, October 21; Battersea Park and Dulwich Park, October 22.

**Barnes Common.**—A new scheme has been prepared by the Board of Agriculture, under the Metropolitan Commons Acts, for placing the future regulation and management of Barnes Common in the hands of the District Council, who are to maintain the area free from encroachments and to frame bye-laws for the prevention of nuisances, the preservation of order, the regulation of sports and games, the exclusion and removal of gipsies, &c. The council will also be empowered to execute drainage and improvements, to repair footpaths, to cleanse Beverley Brook and the pond on Barnes Green, to preserve the turf and grass, and to plant or otherwise make the common more pleasant for exercise and recreation, but nothing is to be done that will otherwise alter the natural features of the common.

**The Metropolitan Public Gardens Association.**—At the first monthly meeting after the vacation of the Metropolitan Public Gardens Association, 83, Lancaster Gate, the Earl of Meath, chairman, presiding, the opening in July of the gardens of St. Matthew, Bethnal Green, and St. James's, Pentonville, was announced, and progress was reported in the laying out by the association of Guy's Hospital disused burial-ground in Bermondsey and of a site in East Street, Walworth. Resolutions were passed agreeing to lay out, if funds permitted, Christ Church disused burial-ground, Blackfriars Road, and a similar ground in York Street, Walworth, subject to proper provision being made in each case for their permanent up-keep. It was stated that the asso-

ciation, through the generosity of some of its members, was about to erect drinking fountain in Homerton and on an open space in Brooke Market, Holborn, and had made grants of seat for certain public thoroughfares in Wandsworth, Paddington, and other places; that the Act of Parliament authorising contributions from various public authorities for the purchase of Churchyard Bottom Wood, Highgate, had received the Royal Assent, and that £31,500 required for the purchase of a riverside ground of 20 acres in Wandsworth had practically been secured by means of grant from the London County Council, the local authority, and private subscriptions, including one of £5000 from Dr. Longstaff. The secretary reported the steps that were being taken with a view to the acquisition of a portion of Golder's Hill Estate formerly owned by the late Sir Spencer Wells, an addition to Hampstead Heath.

## OBITUARY.

### WILLIAM SCOTT.

WE regret to announce the death, at the age of 67, of Mr. W. Scott, Director of the Royal Gardens at Forests, Mauritius, at Stirling on the 3rd inst. after a short illness. He was home on leave after an unbroken residence in the tropics extending to sixteen years. After serving as a gardener several estates in Scotland, he came to the Royal Gardens at Kew. After six months' residence there he was appointed in 1881 to be assistant to the Mauritius gardens and forests at Pamplousses, being appointed director nine years later.

**Campanula patula.**—Can any of your readers kindly inform me where, if anywhere, I can obtain seeds of *Campanula patula* (annual)? It is in my opinion, the most beautiful of a beautiful family. I have never seen it offered in any catalogue, and I have never been able to gather seeds of it abroad.—A. D. G.

**Todea superba.**—I am sure you will excuse my pointing out that the illustration on p. 288 last week's GARDEN represents *Todea superba*, not *T. pellucida*. The latter is a very different plant. Of less consequence, but still worth noting, is the name Ostrich Feather Fern, which on the following page (289) is said to be applied to the Fern, *Todea superba*. This name, however, usually applied to *Struthiopteris germanica*, not to *S. pennsylvanica*. According to Field, in "New Zealand Ferns" the common names *Todea superba* are Prince of Wales's Feather Fern, Chenille Fern, and Grape Fern.—J. BIRKENHEAD.

**Irish-grown wood for Wales.**—A new development of the Irish export trade is, according to the *Pull Mall Gazette*, in evidence in Cork. During the earlier months of the year, occasional consignments of Irish-grown timber were carried to Welsh ports by the coaling boats, to be utilized as pitwood in the mines of the Principality. Previously to this, the coasters, when their coals had been discharged in Cork, made the return trip with cargo of any kind. But within the last few months almost every boat has been freighted with its homeward voyage with this wood, as the results obtained from its use were such as to induce the colliery proprietors to continue the trade. One contract just entered into is for 2000 tons of wood, which will be taken from the timber growing in the neighbourhood of Glanmire, and this is only one of many. The work of preparing such much timber and putting it alongside the steam affords employment to many hands, and the wood industry is one that should prosper.

**Names of plants.**—Henry P. Goodbody. *Vanda cœrulea*, very good form.

**Names of fruit.**—A. J. Williamson.—1, Launceston; 2, Rymer; 3, not recognised; 4, folk Beaufin; 5, Manks Codlin; 6, Hawthornden. *Country Gardener*.—Plum not recognised.

# THE GARDEN.

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(Illustrations in Italics.)

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## ORCHARD AND FRUIT GARDEN.

### ROOT MANAGEMENT OF CORDON PEARS.

Every fruit tree that I am acquainted with gets out of health sooner than does the Pear when grown as a cordon if the roots are neglected and means allowed to take their course. The trees not only resent such neglect by failing to produce profitable crops of fruit, and in some cases rot at all, but they quickly give signs of it in the unhealthy appearance; also by making little or no growth, and once they get into this condition it takes two or three seasons to get them round into health again. As a rule, border for growing cordon Pears in are seldom constructed more than 3 feet wide, and often not so wide as this, while the depth varies from 2 ft to 2 feet 6 inches. Very often no special preparation is made for them, and the trees are planted in the existing soil with the addition, perhaps, of a little fresh compost to cover the soil with to give them a start. A border of the above-named dimensions provides a sufficient quantity of soil for the requirements of the trees for some time after being planted, but as the majority of them are worked on the Queen stock, which emits a multitude of hungry feeding roots, it follows that the soil in the border soon becomes exhausted. When the trees are planted in the staple with little or no preparation beyond a modicum of fresh soil placed about the roots, they soon get into a sorry plight unless the natural soil should be of good quality and suitable for Pear culture. A little attention will avert this if the roots are afforded a top-dressing of rich compost every two or three years, and if this is regularly attended to cordon Pears may be maintained in a healthy bearing condition for a number of years. I have seen trees of this description that were planted twenty-nine years ago, and which are in fine health and bear regular crops of fine fruit. Many may object to devoting so much time to

these cordon Pears, but as the fruits produced by them are invariably of large size and of exceptionally good quality, they amply compensate the owner for any little extra trouble he may be put to. Unless anyone contemplating planting cordon Pears is prepared to afford them this amount of attention when the trees become established and in full bearing, I would advise him to abandon the idea. Of course there are a few varieties of Pears which will not succeed do what one may, but they are the exception, and this is more often owing to physical defects than to faulty culture, and does not, therefore, come within the scope of this note. Cordon Pears are as equally deserving of extra attention in the way of root management as are Peaches and Apricots for instance, and they always give excellent returns when it is accorded them.

The proper method to pursue in Cordon Pear culture is not to wait until the roots have exhausted the soil in which they are planted, and for the trees to assume an unhealthy appearance, but to examine the border annually and so ascertain when the roots are in need of aid in the shape of fresh compost. With a properly constructed border this would not be necessary until the trees were well established and bearing annual crops of fruit, but after this a top-dressing every second or third year will maintain them in a state of efficiency. In the absence of a proper border a stricter surveillance would be necessary, and, as before mentioned, unless the staple is of good quality, the trees will need assistance the third year after planting. My method of dealing with these trees is to remove as much surface soil as can be done with safety, or until plenty of roots is found, much in the same way as when preparing a Vine border for top-dressing, and then replace it with a compost consisting of good fibrous loam, with which have been mixed a little lime rubble, wood ashes, and a plentiful addition of bone-meal. The compost is placed evenly all over the roots, trodden firmly and afterwards mulched. If virgin loam cannot be

spared, a compost such as was recommended in these pages in the issue of THE GARDEN for October 2 for planting fruit trees in will answer admirably if the bone-meal be added to the other ingredients. In the seasons when top-dressing is omitted the border receives a winter mulch of half-decayed manure spread over the surface about 3 inches thick. During the summer months two applications of superphosphate of lime and muriate of potash are given. This is mixed in equal quantities and sprinkled on the surface at the rate of 2 ozs. per square yard. This should be applied just before rain or immediately before watering the border, as, like all other chemical manures, it is useless if left lying on the surface. Other good manures are guano, dried blood and bone-meal mixed together, but I have abandoned their use in favour of the above, as this combination I find supplies constituents more suitable for the Pear. Trees which have got into a bad condition should be partially or wholly lifted and replanted in fresh compost, and then top-dressed afterwards to keep them in a healthy state when they have recovered. This will keep the roots in an active condition. A. W.

**A spider-resisting Strawberry.**—Amongst a good many varieties of Strawberries grown here (Notts) in a light warm soil, which quickly suffers from drought, not one has stood the indifferent summer so well as the new Monarch. I think this will prove to be a capital Strawberry for amateurs, and, indeed, all who have a shallow hot soil to deal with. While more or less spider is visible on other sorts, not an infested leaf can be found on Monarch. Moreover, it is a prodigious yielder, although perhaps the flavour is not first-rate. Many of the sorts, however, having in them the Queen blood, will not do at all satisfactorily where the soil is either shallow or light, but Monarch will, and I recommend it to all who have such gardens to deal with.—GROWER.

**Pear Beurre Bachelier.**—I think it was Mr. Wythes who this season referred to Beurre Bachelier as a sure cropping, handsome, fairly flavoured

Pear, which did well in most seasons on his light soil. With me in upright cordon form it never fails, and is this year carrying a heavy crop of handsome looking fruit. It will hang on the trees later than most sorts, and when placed in the fruit room comes on slowly, ripening here about the end of November. If this Pear would succeed in open market gardens and orchards as a standard, pyramid or bush, it would make a capital market fruit, as its bright and handsome skin is very firm and not easily damaged by pressure. It perhaps is grown largely in some districts, but I have never, so far as I remember, seen it quoted in lists of market sorts.—J. C.

#### MEALY BUG ON VINES.

Will any reader of THE GARDEN kindly give me a remedy for this troublesome pest on Vines? I have it here in a very acute form. Is sulphur of any use if the house be filled with the fumes after the leaves are off? I have tried going over the rods weekly with paraffin and other insecticides, but have only succeeded in keeping the pest out of the bunches. The house is to be painted this autumn.—C. EDWARDS.

\* \* C. Edwards will have a good opportunity of reducing, if not entirely exterminating, the mealy bug in his vineyard during the autumn and coming winter, and no time should be lost after the leaves fall in commencing operations. Sulphur fumes, if arising from burnt sulphur, are too dangerous to be recommended for use in a house where there is any plant life, dormant or active, and simply painting the hot-water pipes with a mixture of flowers of sulphur and water or milk mixed together will have no effect whatever on the bug. A cheap and very effective remedy is easily obtained by mixing 6 ozs. of paraffin (petroleum) with 3 ozs. of soft soap and adding to this 3 gallons of soft water, which should be used at a temperature of about 130° Fahr. This mixture should be forcibly applied to every part of the interior of the house by the aid of the syringe or garden engine, keeping it well stirred while using. The best way of mixing is to stir the paraffin into the soft soap before adding any water, as it then becomes more soluble and the danger of injury to any Vine buds touched by the solution is lessened. This mixture will form a solvent that will penetrate the woolly covering with which the female insects protect their eggs, and will destroy both the latter and any live insects with which it may come into contact. I need hardly say that it is absolutely necessary to penetrate with the mixture all crevices and holes in the woodwork and walls. The next step should be to strip off from the Vines all the bark which can be removed easily with the thumb and finger-nails, and it will be found that this can best be done when the Vines are wet. It will be found convenient to carry out the work immediately after the syringing above recommended has taken place. No scraping with a knife or any other forcible means of removing the bark should be allowed. I never use the clogging mixtures of clay and gas-tar and the like which are sometimes recommended for smearing the rods, but prefer washing them with a solution of Gishurst compound mixed in accordance with the directions, and in the case under notice I should recommend this being done two or three times between the times of pruning and starting the Vines.

In addition to the painting of woodwork which is to be carried out, and which should follow the cleansing operations, an application of hot lime-wash should be given to the walls and all available surfaces not painted. Two or three inches of soil from the top of inside borders should also be removed and some new soil put in its place, after which the floors and all surfaces which have not been already dealt with should be scalded down with very hot water. Strict attention to the above directions must be given and nothing overlooked. Cases are frequent in which remedies are rightly applied up to a certain point, only to over-

look some odd corner or space underneath the pipes or some other spot not easily reached, and which may be teeming with insects in all stages, only waiting for the genial warmth of a vineyard at work to bring them again into vigorous action. When the Vines again get into growth they should be closely and frequently looked over for stray insects, which are then easily killed, for it may be that in spite of care a small colony here and there will escape under the protection of an old snag on the rod, and in this case a touch of a small brush which has been lightly dipped in spirits of wine will kill a whole colony, as the spirits will spread to some distance round the spot touched with the brush. It must be understood that such a remedy must only be applied to the old wood on the Vines and must not come near the buds or new growth. Of course no infested plant should be admitted to the house after the cleansing is over, it being impossible to keep clean Vines if any fresh stock is admitted to the house.—CORNUBIAN.

**Late Melons.**—Melons ripened during October, unless that month is exceptionally sunny, and the beginning of November, are, as a rule, deficient in flavour. For this reason many gardeners do not agree with certificates for new varieties being awarded during October. Much may be done, however, towards improving the quality of these late crops of Melons by general management. Very little air will now be needed, a chink being sufficient even on the sunniest days, this being removed at 2 p.m. Overhead syringing also had now better be entirely discontinued, and even damping down confined to the forenoon of fine days. Root moisture, too, in the case of fruit now turning should only be of such a nature as will prevent actual flagging. Ordinary treatment now not only causes indifferent flavour but wholesale cracking of some varieties.—C. H.

**Pine-apple Prince Albert.**—Although Pine growing in private gardens has dwindled very much during the last twenty years, one occasionally meets with healthy batches of plants, and to me they are always interesting. There is no variety that can equal for flavour the Ripley or Moscow Queen, but these are, strictly speaking, summer fruiting varieties, harder varieties being necessary where fruit is wanted in the winter months. The Smooth Cayenne is very suitable for the purpose, but the variety I wish to draw special attention to is Prince Albert. Both foliage and fruit are very distinct, the former being of a very dark purplish hue, carrying a dense bloom, the fruit being long and conical in shape, good fruits often being as many as twelve and thirteen pips deep. The plant does well grown in rather small pots, and enjoys a strong bottom heat when swelling off. The flavour is not unlike that of that other good winter Pine Black Jamaica.—J. C.

**Alnwick Seedling Grape as a stock for Gros Maroc.**—With many gardeners, myself included, Gros Maroc on its own roots is anything but satisfactory from a productive point of view, neither are the bunches of any length. Like many other Grapes it seems to do better when grafted on to some other stock. A striking proof of the good effects of this operation may be seen at Hill-side, Newark, where Gros Maroc was several years ago inarched on to Alnwick Seedling. One rod on its own roots still remains, but the inarched rod produces bunches nearly twice the size, the berries also being much larger. The narrowness also of the border is worth a passing remark, this, which is inside of the house—a span-roofed one—being only some 3 feet or 3½ feet wide. Beside the Gros Maroc referred to, Alicante, Muscats, and Hamburgs occupy the border, and have done so for at least half a dozen years. The vigour and productiveness of all these Vines are all that could be desired, feeding, it is true, being practised rather liberally when the Grapes are swelling, good top-dressings being given annually. The above is a proof of what can be accomplished in both narrow and shallow borders, and, although

this is perhaps an extreme case, deep wide V borders will soon be a thing of the past.—N.

**Young Strawberry beds.**—Strawberry planted in July or August are, as a rule, look less vigorous this autumn than usual. This is to be wondered at, especially in gardens that suffer from drought, as runners were hard to find last June for layering. I notice that on the ground, as, for instance, where the plants were put out between rows of spring sown Onions, they have made more progress than where growing in a quarter that had been loosened by digging previously. July in most parts being very loose, open ground, no matter how freely trodden down after being dug, lost the moisture more soon than the solid root-run of the former position, and roots were made more quickly, to say nothing of the freedom from spider the plants enjoy. In any case where the slightest looseness is acceptable, the best way is to now go over the beds and firmly tread round each plant in the same manner as Carnation growers treat their plants in spring, removing all runners, passing the Dutch hoe through the surface once more, and refraining from putting on any mulching for the present, so that not only top growth but roots also may partake of the fullest benefit of every ray of sunshine between now and the end of November. Certain varieties have even this season seemed to defy the drought and attacks of spider, on account of their vigorous character. Amongst these is Monarch. Its constitution and the fact that any quantity of runners may be had from the parent plants in June, and that in unfavourable Strawberry seasons, are sure to make Monarch a favourite with market growers, as it is also a prodigious cropper.—

#### PEAR DOYENNE DU CONICE ON NORTH WALLS.

It would not do to advise everyone to grow Doyenné du Conice on north walls in every garden. I have this year obtained my only crop from trees on this aspect, trees in the open had failed to bear fruit. My trees on the aspect are well sheltered from rough winds, a belt of tall trees protecting them. There is a great advantage in having fruit trees in different positions as the season is prolonged, and as there be no question as to the good qualities of this variety, it is well to have as long a supply as possible. I find the best fruits are those grown in cordons. Trees on north walls are inclined to produce fruits covered with russet; this does detract from the flavour. I am aware a skin is much the best and more presentable with so good quality this is overlooked. The chief point with north wall trees is to have roots in well-drained soil. In heavy land year I grew this variety in raised borders, and, to say the best fruits were secured from a that had its roots under a hard walk, where digging and heavy traffic were constantly going. The trees produced grand fruit, and I attribute the success to the trees not getting an excessive moisture in the heavy clay soil, as the water drained away from the surface. The trees bore a sturdy, fruitful growth and no rank wood were on an east wall on the Quince stock I think it a profitable plan to plant a tree or two of the best-known fruits in out-of-the-way places as it often happens such trees thrive, and are most serviceable. I recently saw a wall fence covered with cordon trees of this variety and a few others, the fence being used to some stables, and it was most ornamental, at the same time profitable, as it was the only place in a large garden that had trees cropping well. More interest is secured by what is termed haphazard planting—a tree here and there where there is room. By growing trees in different aspects a crop may often be secured.

G. WYTH

**Apple James Grieve.**—This promises to be a valuable addition to the dessert Apples was given an award of merit on the 12th inst.

Royal Horticultural Society, but as several of the members had no knowledge of its cropping qualities, the higher award, a first-class certificate, was withheld. Its season is October, but I should say it would keep much longer, as the fruits were firm, the flavour brisk and refreshing. In appearance it resembles a large Cox's Orange, but of a brighter colour and with the good eating qualities of the older variety. It comes from Scotland and is said to bear there when the Orange fails. This will be a gain, and though we have no lack of Apples, a good fruit such as James Grieve is always welcomed.—G. W.

**Apple Lemon Pippin.**—In a season when the dessert Apples are scarce, it is pleasing to find the free-cropping qualities of this old variety. Not only are the trees bearing freely, but the fruit in most cases are finer than usual. For the few years I have never failed to secure a fair crop from bush trees of this variety. I have seen it grown as a standard tree, but do not advise it as such as there is too great a percentage of small fruit. The fruit of this variety is readily distinguished, the knob at the stalk end being peculiar. It is of first quality and in season from November to April. Being a late fruit it should be given a cool store and gathered late. It is less so than formerly, the larger showy Apples being more in favour, but it is well worth including in all lists where good late dessert kinds are needed as there are none too many good ones early in the season.—S. H.

#### NOTES ON STRAWBERRIES.

We have to thank our readers all over the country for so kindly replying to the following questions, and we hope that the notes will prove valuable:—

Will you kindly aid us in throwing some light on strawberries of best quality for the use of private growers, as market growers have a different standard from that which applies to the private owner, and favour those kinds that bear large, rather than those that are remarkable for their colour and quality? For those who use their own beds we think that a different standard should be used.

What kinds do you consider the best for your district, i.e., as grown in gardens, making into account those grown in the open field for market?

The best early and late kinds for the open air in your district?

Which of the newer sorts do you find most worthy of cultivation from a garden point of view?

The best time to plant so as to secure the best and most regular crops?

The really excellent flavoured varieties of strawberries are, as far as my experience goes, very few indeed, and in discarding all others from the notes one must perforce throw over both the very early and very late varieties, for none of them come up to the requirements. British Queen has been for many years the standard variety when judged by flavour, but neither it nor a few other good varieties which claim it for one of the parents are suited for a variety of soils, and the soil here is too light to suit them. The best flavoured varieties I grow, taken in rotation as they ripen, are Royal Sovereign, Keen's Seedling, Vicomtesse Héricart de Thury, Auguste Nélot, President, and Latest of All. Though I have included Royal Sovereign in this list, I cannot say that I have been quite satisfied with it this year on flat beds, for though the season has been propitious, I found that very many of the fine fruits turned mouldy before thoroughly ripening, and this, too, on one-year-old plants set well apart. On raised sloping borders it was all that could be desired, as it has been in former years,

but I shall hesitate to advise planting it largely until after another year's trial. Among newer varieties which I have so far tried there are none that I can conscientiously recommend for their flavour, but as my trials have only included eight or ten varieties, they have not been exhaustive by any means, and others may have been more fortunate. One thing is certain, there are many varieties sent out on the strength of their handsome appearance which never should have left the raisers' hands. The best time to plant is as early as it is possible to obtain well-rooted runners, as this ensures a good start, and most varieties will give a good crop of their best fruits in the following year. Later-planted runners do not get well anchored before winter and fail to make good crowns, while those kept over in nursery rows until spring give no fruit the first year.—J. C. TALLACK, *Livermere Park, Suffolk.*

—The best flavoured kinds I have grown are Keen's Seedling, President, Empress of India, Latest of All, Dr. Hogg, British Queen, Oxonian, and Waterloo. The early kinds, as far as I have grown them, have not much to recommend them as regards flavour. Royal Sovereign is an immense cropper, the fruit of fine appearance but soft. Noble, much as it has been decried, is fairly good if well ripened in a sunny spot, and quite as good as, though earlier than, Sir J. Paxton. Dr. Hogg and Latest of All are my best late kinds, the former requiring the same treatment as British Queen. Royal Sovereign is, I find, the best kind from a garden point of view, as it combines with fair quality a good constitution and freedom of fruiting. The better flavoured new kinds I have tried are poor growers in this garden. As soon as it is possible to get well-rooted layers is the best time to plant, always provided the ground has been well prepared and the plants are well attended to. If these are ready by the middle of July they should be planted before the roots have time to coil themselves thickly in the pots, and if well watered both at planting time and during dry weather afterwards there is no fear of their flowering prematurely, as starved plants sometimes will. Such plants fruit freely the season after planting, and go on improving for two or three seasons according to the variety.—H. R. RICHARDS, *Coldham Hall, Bury St. Edmunds.*

—The Strawberry crop in this part of Devon has been heavy. I find the best for general use are Keen's Seedling, Noble, Vicomtesse Héricart de Thury, Auguste Néaise, Sir J. Paxton, Sir C. Napier, Impératrice, and Waterloo. Many of the newer kinds have British Queen blood in them and do not grow well on the light soils of the shaly water stone of South Devon. I have grown Royal Sovereign one year. The fruits are fine, but the leaf stalk is too long, requiring so much space under glass. The above eight kinds are hardy and with one exception are of good flavour. I find deep cultivation is not necessary: 12 inches to 15 inches, with a liberal supply of cow and horse manure not too much rotted, the plants grow satisfactorily. Before planting the ground is well trodden. The last week in July is a good time to plant, and two years is long enough for them to remain. At the end of February of the second year a good top-dressing of stable manure is given them.—G. BAKER, *Menblaud, Devon.*

—The best flavoured Strawberries in this district are Sir Joseph Paxton, which is handsome in berry, very solid and richly flavoured, also forces well. Keen's Seedling is one of the best in every way. President is one of the best for general use, highly flavoured and splendid in colour. Royal Sovereign is, I think, a Strawberry that may displace Sir Joseph Paxton in time. It is free-growing, fine in berry, and of a rich vinous flavour. British Queen is an extra highly-flavoured kind; however, the plant is tender and requires the best cultivation. Vicomtesse Héricart de Thury has the one good point of thriving in most soils and situations. It is very hardy, an abundant cropper, richly flavoured, and one of the best for forcing in large quantities. Dr. Hogg is a first-class Strawberry in every re-

spect, and should be grown where British Queen does not succeed, owing to its hardier qualities. Waterloo is a most distinct and first-class sort, of excellent flavour. Laxton's Latest of All is a sort worthy of cultivation; fruit extra large and of good flavour. A useful sort is Lord Napier, handsome and of good flavour. The best early and late kinds are—First earlies, Keen's Seedling, King of the Earlies, Noble, Vicomtesse H. de Thury, La Grosse Sucrée, Sir J. Paxton. Second earlies: Royal Sovereign, James Veitch, Lucas, British Queen, Dr. Hogg, Gunton Park. Late sorts: Waterloo, Latest of All, Lord Napier, Frogmore Late Pine, Elton Pine, Helene Gloele. Leader is of splendid colour and flavour. Veitch's Perfection is a first-class flavoured fruit; in fact, I think it as fine as British Queen. Monarch is rich-coloured, firm in the flesh, and of good flavour. I cannot too strongly recommend layering into small pots as early as runners can be procured, say by middle of July, and planting at the end of July in well-prepared beds. A capital crop of Strawberries will be procured the following June. I treat several sorts as annuals, with the best results as to size and flavour.—J. W. McHATTIE, *Strathfieldsay.*

—On the black clay subsoil of this locality some of the finer flavoured Strawberries are difficult to cultivate, and must be grown as biennials to obtain good fruit. The kinds which stand best are La Grosse Sucrée, Royal Sovereign, President, Elton Pine, and Bieton Pine. The newer variety, Stevens' Wonder, also promises well. The best flavoured kinds are British Queen, La Grosse Sucrée, President, and Royal Sovereign: the best early kinds, Royal Sovereign, La Grosse Sucrée, and Noble; the best late kinds, Jubilee, Laxton's Latest of All, and Waterloo. Of the newer kinds Royal Sovereign and Leader are the best. The best time to plant is the second and third weeks in August. With me the indispensable kind is President, which crops well, forces well, and bears carriage better than any other kind.—J. JACQUES, *Waddesdon, Bucks.*

—On the rather retentive soil in this locality Strawberries of all kinds do well. After trying various sorts I still cling to President as the best all-round kind; it is a general favourite, and unsurpassed for flavour. British Queen, Dr. Hogg, Vicomtesse Héricart de Thury, and Keen's Seedling are also of excellent quality, and do well with generous cultivation. Viscountess, La Grosse Sucrée, and Royal Sovereign are the best early kinds here, either for forcing or the open air; and Oxonian, Frogmore Late Pine, and Elton Pine the best late kinds. Of the newer kinds of Strawberries, none have "caught on" so well as Royal Sovereign, either for market or private garden; Lord Suffield and Gunton Park are both good sorts for the garden, the latter rather too dark in colour to be attractive. No plan can beat layering early runners into small pots and planting them out the first week in August on well-prepared ground so as to ensure a good root-hold before winter sets in. Forc'd plants, cared for when turned out from under glass, and planted out in rows 3 feet apart and 2 feet apart in the rows, give splendid crops the following season, but they must be copiously watered to induce quick root action.—WILLIAM NASH, *Bulminster Gardens.*

—The best flavoured Strawberries grown here are Vicomtesse Héricart de Thury and Duc de Malakoff. Scarlet Queen is also excellent, but although of brilliant colour, I understand it does not maintain it when preserved. La Grosse Sucrée is still one of the best, this and Royal Sovereign making a handsome pair. The best early varieties are Vicomtesse H. de Thury and Royal Sovereign, the best late being Waterloo, which is first-class in this district. Royal Sovereign is the best of the newer ones I have tried. Monarch and Leader were not in good form and no opinion could be had. I always endeavour to plant early, a good time being the end of July or early in August; in fact, earlier if the ground can be cleared and prepared for their reception, as then the plants get well established

before the winter, the soil being warm and conditions favourable to rapid growth.—J. J. CRAVEN, *Allerton Priory Gardens, near Liverpool.*

## FLOWER GARDEN.

### NOTES FROM FILLINGHAM CASTLE, LINCOLN.

It would be scarcely possible to exaggerate the brilliancy of the autumn flowers on this lovely October morning. The garden suffered much in August from the long drought, and even the deluge that began about August 21 and lasted a fortnight failed to save the Phloxes, which simply never bloomed. They were, however, almost the only real victims, and now the late autumn flowers have come successfully through these climatic ordeals, and the long borders devoted entirely to plants flowering from July to November are a blaze of colour. The very tall late single *Helianthus rigidus elegans* towers 10 feet high at the back, with the much dwarfier *H. rigidus semi-plenus* below. At least fifteen different sorts of Starworts give varying shades of purple and pale lilac, from the tall waving branches of *Aster Novi-Belgii* Robert Parker to the brilliant *Amellus* (over which the lovely butterflies hover) and the very free-flowering *A. acris* and *A. vimineus*. The early *Chrysanthemums* are gorgeous, masses of different colours, and never so good as this year. The *Pentstemons* are quite at their best, and better this year from seed than cuttings. *Rudbeckia Newmanii* is very gay, and so are *Gaillardias* and *Montbretias*, these last flowering very late this year. The graceful form and crimson colouring of leaf and seed of the *Mountain Spinach* come in lovely contrast to the lower tones of the *Statice*s, and show well near the snowy white of the *Japanese Anemones*. The starry flowers of the *Nicotiana affinis*, grown for the sweetness of its evening perfume, now look up as if to welcome the autumn sun, instead of hanging as if dead under the summer rays. A lovely effect is produced by a mass of *Golden Rod* and the blue-grey of the tallest *Starwort*, all forming a background for the brilliant crimson and yellow spikes of the *Tritomas*. Turning down a side border devoted to rarer plants, which are therefore less massed and stand more out in detail, I can show you a beautiful picture. In the foreground is a large plant of *Funkia grandiflora* or *F. japonica*, undisturbed for several years and throwing up tall spikes of lovely pure white scented flowers above its pale tender green leaves. Just under it the bright blue flowers of the *Plumbago Larpentæ* contrast well with their foliage of dark green, changing to metallic-red; at the back, *Helenium grandicephalum striatum* grows 4 feet high (and never more gay than at the present moment with its red and yellow striped flowers); whilst a little further on a new note of colour is struck by the glowing pink of *Sedum spectabile* side by

side with a plant of white-leaved variegated *Mint*, a late spike or two of *Veronica sessilis*, the whole carpeted by some of the lovely *Tufted Pansies*, which, after suffering severely by the summer drought, are now flowering freely, and none better than *Border Witch*, *A. J. Rowberry*, *Duchess of Fife*, *Christiana*, *W. Neil*, and *Sheba*, which I can only describe as a rayless *Son of the Rock*.

In other parts of the garden the Ivy-leaved *Geranium Charles Turner* and the dark blue *Lobelia* still show in lovely contrast, the bushes of scented *Geraniums* grow 2 feet high in places, and the *Begonias* blaze under the October sun. *Salvia patens* is flowering most profusely, and its brilliant blue was never more effective than, as now, backed by the greenhouse *Tropæolum Fireball*, with its sea-green leaves and crimson flowers. I may mention that *Tropæolum speciosum* is thoroughly at home here and grows in wreaths of scarlet and green 20 feet high up grey stone pillars carefully faced with coarse wire netting for it to cling to, and it also throws its lovely wreaths over the hardy *Fuchsias* growing under the north wall. The *Dahlias* also deserve notice this October morning, being just now at the very height of their glory. Amongst the best here are *Aphrodite*, *Gloriosa*, *Matchless*, *Bertha Mawley*, *Mrs. Peart*, *Ernest Cheal*, *Purple Prince*, *Countess of Pembroke*, *Miss Irene Cannell*, *Delicata*, and *King of the Cactus* (now most splendid), and the gay little old favourite, *Glare of the Garden*. I again make a note of the superiority of cuttings over old roots, the cuttings flowering most profusely, whilst the old roots have produced an immense growth of leaves.

The *Roses* seem to have stood well both drought and deluge, and many are the lovely blooms to be found down the *Rose border*, both on the dwarfs and also on the climbers up the rustic 7-foot trellis at the back. Passing to this border under an archway covered with *Gloire de Dijon* *Roses* and purple *Jackmani Clematis*, I find nothing better at this moment than *Marie d'Orleans*, *Mme. Hoste*, *Souvenir de S. A. Prince*, *Catherine Mermet*, *Beauté Inconstante*, *Duc A. de Luxembourg*, *Comtesse Riza du Parc*, *Marie van Iloutte*, *Camoens*, *Distinction*, *Anna Olivier*, *Mme. de Watteville*, and *Marquise de Salisbury*. Amongst the climbers at the back, *Ophirie* has never flowered so well or continuously as this year. Alike in sunshine and rain it has been a mass of bloom. *Celine Forestier* has also been very good, and a few late flowers are still to be found on *Mme. Alfred Carrière*, *Bouquet d'Or*, *Cheshunt Hybrid* and *No. 1* and *No. 3* (sweetest of *Roses*) *Waltham Climbers*. I must not conclude these few notes on a *Lincolnshire garden* without naming the *Limber Clove Carnation*. A few of its lovely crimson flowers are still to be found, and will continue in all their beauty till killed by the frost.

October 15. MRS. PORTMAN-DALTON.

***Tropæolum speciosum* on the Pentland Hills.**—This *Tropæolum*, which so many people

try to grow, but fail, I saw growing freely other day at one of the shooting lodges belonging to Mr Charles W. Cowan, of Valleyfield, *Northlothian*. The lodge stands on one of the beautiful green slopes of the *Pentland Hills* in the *South county*, at about 1000 feet above sea-level. *Tropæolum* is trained on sheets of wire netting fully 5 feet wide and over 15 feet long, attached to a portion of the south front of the building making in all a sheet over 25 feet wide and 15 feet in height. The border in which it grows is only about a foot wide, and contains, I am told, small stones to which the roots love to cling. It has been watered at times with sheep manure water, which it seems to enjoy. Besides the wonderful *Flame Flower*, with its thousand bright scarlet flowers, I observed well-trained plants of *Gloire de Dijon* *Rose* and *Clematis Jackmani* in fine bloom.—W. L. M.

**Storing Dahlia roots.**—Many people would have more success with their *Dahlias* had they more suitable place for storing the roots during the winter months. The plan adopted by me of suspending from the roof of a dry, airy shed is not a good one, as shrivelling, more or less, and weak growth in spring are sure to follow. As long as actual frost is kept from them, the best storing place the better. I have found a place better than a cool underground cellar, where shutters could be put to the window in case of severe frost. Here the temperature is uniform one, and the roots remain in a pleasant and sound condition. In places that fluctuate regards temperature, dry rot often sets in. The best display of *Dahlias* I ever had was on plants that were not lifted from the border in autumn, but merely covered with mounds of fine cinders; but the position was a dry, well-drained one and the winter not severe. The fact, however, goes to prove that the roots are far harder than many suppose them to be.

**Michaelmas Daisies at Trent Park.**—These useful autumn flowers are well cared for here. None of the sorts could be considered the least dowdy in appearance, the selection being confined to the best of each type. The plants are growing in a long border with a northern aspect and seem to do extremely well. By a careful arrangement when planting, the tall-growing sorts form a splendid background, following with those of intermediate growth and finishing off in front with dwarf varieties. One especially noted was the easy way in which the plants were staked and tied, so that the graceful beauty of the plants were prominently set forth. The varieties in the pink of condition were *Amellus bessarabicus*, *Aster Novi-Belgii* de *la Roche* with grand heads of blossoms, on compact growth not exceeding 3 feet in height; magnificent plants of *A. N.-B. Robert Parker*, the lavender-colored blossoms making an effective contrast with those of the white and darker shades of colour in the background. *A. N.-B. Mrs. John Wood* is one of the best white flowers with a yellow centre, and was very free, branching and distinct. *Aster cordifolius elegans* was much admired with its long graceful sprays of soft lilac flowers. The best of the collection was *Aster N.-B. levigatus*, in some gardens labelled *A. formosissimus*. It bore grand heads of rosy-lilac flowers. The height of the plants was about 2½ feet. *Aster Areturus* was very distinct, its long individual footstalks giving it increased value as a cut flower. *Aster multiflorus* with close heads of pure white flowers was developing fast, and appeared in better condition than in past years. Single-stemmed plants of *A. Coombefishaere*, with its medium-sized flesh-coloured blossoms were unique. *A. vimineus nanus* with its beautiful graceful sprays of tiny white flowers was just past its best, but *A. vimineus* was developing lovely growth to follow on. Other good kinds were *A. polyphyllus*, pure white, yellow disc; *A. puniceus pulcherrimus*, bluish white, yellow centre; *A. Lindleyanus nanus*, rosy-lilac; and *A. N.-B. Maia*, possessing large full, rosy-lilac flowers with golden centres. D. B. C.

LILY OF THE VALLEY IN FRUIT.

The Lily of the Valley is so well known as one of our most beautiful native wild flowers, and is so extensively cultivated for its spikes of pretty bells, that one rarely, if ever, even thinks of it as sometimes producing very handsome racemes of fruit in autumn as well as the flowers of spring. *Convallaria majalis* is a monotypic genus of the Lily family (Liliaceae), and

pogon, &c. In colour there is some variation, though most are red, as in *Smilax*, *Asparagus*, and *Convallaria*, but now and then purple, or a lovely blue, as in the Turquoise Berry, *Ophiopogon japonicus*, and *O. Jaburan*. Some of the *Polygonatum*s have red fruits, but the common Solomon's Seal (*P. multiflorum*) has blue-black lustrous fruits not unlike black pearls. The berries of *Ruscus aculeatus*, or

through the gnarled old stems and branches of *Lentiscus* and other shrubs or small trees.

Although the Lily of the Valley in several of its best forms fruits year after year at Straffan, where it is very beautiful, I rarely see it elsewhere, nor do I remember ever seeing any record of its fruiting as growing wild in the woods of Westmoreland and Cumberland, though of course, it must often do so. The fact that several of the best varieties or forms of Lily of the Valley are growing side by side in beds at Straffan may account for its fruiting there so luxuriantly, but perhaps if artificial pollination were resorted to the pretty red berries might be obtained with tolerable certainty, as is the case with the exquisite blue Turquoise Berry when grown in pots in a dry cool greenhouse or frame. All the kinds of Lily of the Valley are so lovely that one can never have too much or too many of them, but when the spikes of snow-white cups or bells are succeeded by clusters of olive-green, orange, and crimson berries, an additional advantage is obtained.

F. W. BURBIDGE.

**Carnation Maggie Lawie or the Burn.**—"C.'s" note to the contrary notwithstanding, I maintain that my last communication was correct in every particular. I was quite aware that one who, perhaps, had some right to give it a name called it The Burn Pink, but the fact remains that it was called Maggie Lawie by the raiser, and that it was distributed by that name at his request. It is a matter of small consequence. My note was a protest against the too common practice of interested parties giving high-sounding new names to old subjects.—M.

**Viola pedata.**—This unique little species in the more sheltered parts of the rock garden still flowers more or less profusely, and is of value on that account alone. Where the plants are given a fair depth of peat and loam, with plenty of grit and a small quantity of very old manure, it is surprising how long even small examples will continue in flower. This is not the case when a position either too sunny or too dry is given. So pretty a plant is worth some care to make it a complete success, and where small groups can be formed in the rock garden it is well to give a mulching of small stones about the plants to retain a uniform condition of moisture. Heavy soils should be freely mixed with short leaf-soil to the extent of



Lily of the Valley in fruit. From specimens sent by Mr. F. Bedford, the Gardens, Straffan House, Co. Kildare.

produces comparatively large terra-cotta red or vermilion coloured fruits about the size of large Peas, on spikes 9 inches to 12 inches in length. This illustration, from specimens kindly sent from Straffan by Mr. Bedford, gives a good idea of the size, form, general contour and pose of the fruit. The berry-like fruits of Lily of the Valley are characteristic of many of the Liliaceae, such as *Asparagus*, *Smilax*, *Ruscus*, *Polygonatum*, *Ophi-*

*Butcher's Broom*, are rarely seen in England though common in S. Europe. They are of a bright crimson-red when ripe and contrast very effectively with the dark olive-green of the flattened branches. One but rarely sees the *Smilax* fruiting in our open-air gardens, but at Antibes and elsewhere in S. France and Italy it is wreathed with bright red fruit clusters, as it scrambles along with the prickly *Asparagus*

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one-half, and in such a mixture the plants usually thrive and flower abundantly.

**Double Violets in autumn.**—What lately surprised me was to find not only the well-known double Violet Marie Louise blooming profusely in the open border at Fulbeck Hall, Lincolnshire, but also that too little known paler variety Lady Anne Campbell just as full of flower, the blooms being large and the stems long. I have grown this excellent Violet for a number of years, but have never gathered a bloom from the plants, however well grown and healthy, until February, when it eclipses all others as a profuse bloomer. The plants at Fulbeck prove that soil and situation have a great influence on even the date at which Violets flower, and I may mention that at Gunton I have more than once seen the white Comte de Brazza blooming freely in September in open borders, a thing it would never do with me here in Notts till spring, even in frames. I have now (beginning of October) plenty of blooms of Marie Louise.—J. CRAWFORD.

### NARCISSUS CALATHINUS.

THE writer of the notes on *Narcissus calathinus* which appear on page 277 of THE GARDEN has earned the goodwill of all lovers of wild flowers by trying to save from extinction in its only native habitat—*Ile Dréneec*, off the coast of Brittany—that interesting variety of *Narcissus triandrus* which he describes as *N. calathinus* (Lin.). He truly says that writers about *Narcissus*, both English and French, are inconsistent not only with one another but with themselves in the names they give to the varieties of *N. triandrus*; but one thing is certain, that Linnaeus, in enumerating *N. calathinus* as a species, had not present, either to his eyes or to his mind, any variety of *N. triandrus*, still less the variety found in the *Ile Dréneec*. Linnaeus published his "Enumeration of Species" about the middle of last century, and the *triandrus* of the *Gleanans* was discovered by Bonnemaison of Quimper in the beginning of this century; it was communicated by him to Loiseleur, who described it in error as *N. calathinus* (Lin.) in his "History of Daffodils Indigenous to France," published about A.D. 1810, and the error was adopted by De Candolle in the letter-press of Redouté's "Liliaceae," published about the same time. Linnaeus in enumerating *N. calathinus* refers the species to Clusius' "Rariorum Plantarum Historia" (A.D. 1601), p. 158, "*Narcissus juncifolius* amplo calice," No. 9. Those who will turn to that delightful book will find that Clusius there figures and describes a form of *N. odoratus* which he saw flowering in the Botanic Garden at Leiden in A.D. 1595. Moreover, it is certain that in the Linnaean Herbarium the specimen of *N. calathinus* is a form of *N. odoratus*. These facts were recognised by botanists in England at the beginning of the century. In the volume of the *Botanical Magazine* for A.D. 1806 (t. 934), Sims, the editor, fully points out, in figuring *N. calathinus* as a form of *N. odoratus*, that it is the *N. calathinus* of Linnaeus enumerated in his "Species Plantarum," ed. 2. The same editor, in vol. xxxii., tab. 1300, published in A.D. 1810, in figuring *N. triandrus*, warns his readers against the error of De Candolle in "Redouté," in making *N. calathinus* of Linnaeus a form of *N. triandrus*. Nevertheless, in spite of these correct portraits and warnings, English writers—Haworth and others—subsequently adopted the error of Loiseleur and De Candolle. The writer of the notes in THE GARDEN rightly says that the variety found in the *Ile Dréneec* is unique. Many years ago I received more than once from M. Blanchard, of the Brest Botanic Gardens, bulbs which I cultivated in my greenhouse and compared with

the typical form of *N. triandrus* from Oporto and other varieties collected in other parts of the Spanish peninsula. Some collected by Mr. George Maw near Gijon, in the Asturias, were given to me by him as *N. calathinus*. These, as well as occasional individuals amongst those sent from Oporto, had the crown as long or longer than the perianth when turned down; still, I could easily distinguish them by other characters from the *Dréneec* variety.

The writer in THE GARDEN says that Willkomm and Lange in their Spanish Flora claim a place in Spain for this variety, which they call *N. calathinus* (Lin.), alleging that it is found near the town of Goditano, in Spain. I have referred to the passage, "Flora Hispanica," vol. i., page 152. The authority cited is Boutelou, a Spanish botanist, who compiled a famous herbarium, still preserved, about the beginning of this century. A specimen in it is labelled *N. calathinus* (Lin.), "in agro Gaditano," that is, "in the neighbourhood of Cadiz"—a very unlikely place for any of the *N. triandrus* tribe, of which none is known to have been found within 300 miles of Cadiz; but the authors add "perhaps the specimen belongs to *N. juncifolius*." This is likely enough, as that species is common near Cadiz. They conclude by saying that *N. calathinus* (Lin.) belongs properly to *Gallia Armorica* (? *Armorica*), the Roman name for that part of France which includes Brittany and the adjacent islands.

I would suggest in consideration of the above facts, which anyone may verify for himself, that the variety ought to be called *N. triandrus* (Lin.) var. *calathinus* (Loiseleur).

Edge Hall, Malpas.

C. WOLLEY-DOD.

**Eulalias in Surrey.**—I think it is to be regretted that one does not oftener meet with these in gardens, considering they are not quite so tender as some people think. Just now they are conspicuous ornaments in the pleasure ground. The variety *zebrina* is very telling just now with its many crimped plumes. I have this variety in three positions, viz., on the lawn and in the herbaceous border, also in a dell in deep, open soil in rather a shady position. It flowers in all the positions named, but it flourishes the best in the same position as *Tropaeolum speciosum* does so well in. Here it throws up its grass and plumes 8 feet or 9 feet high by the dozen. I protect my plants in winter by placing round them some short sticks about a foot out of the ground and stuffing inside these some Fern.—J. R. HALL, *Foxwarren Gardens, Cobham*.

**Bulbs for cut flowers.**—If not already done no time should be lost in getting bulbs planted. During the past few years the demand for fresh cut flowers has increased enormously, and in spite of the enormous importations and the low rates at which they are sold, there is still room for growers in the neighbourhood of towns. No position I have yet tried for the beds suits them so well as the spaces between rows of bush and pyramid fruit trees, for when these are set out at from 12 feet to 18 feet apart there is ample room for a good bed of bulbs. The trees form an excellent wind-break, and the bulbs grow up, flower, and go to rest before there is much need to tread on the beds, while by the time fruit-picking comes on they have mostly gone quite to rest. I find Daffodils of all kinds the best of all bulbs for cutting, and they do not require lifting every year. Hyacinths and Tulips, Irises, Lilies of many kinds all do well on the permanent bed plan, and *Gladiolus The Bride* is very beautiful in the south of England, but as it pushes up its growth before the severe weather comes on we have to cover the beds with litter during frost. I need hardly say that Lily of the Valley is indispensable where cut flowers are grown, and the beds should occupy both sunny and fully shaded spots,

so as to prolong the season as much as possible for a very late supply is in many cases fully profitable as a very early one.—J. GROOM, *Goport*.

**American Carnations.**—In reply to Mr. Herrington's remarks in your issue of October 1 dated from Madison, N.J., I beg to say that what I wrote on this subject was intended for English and not American readers of your journal. There is no doubt whatever that these Carnations specially treated for the purpose, are excellent winter bloomers, but having imported a number of the best, or what are considered the best American Carnations direct, I find that they will not please in this country. What I meant by "papery petals" was that they had an absence of quality, were thin, and had not that substance that is here considered essential in a good Carnation. The saw-edged petal which is present in nearly all American Carnations is fatal to it being any matter of consideration over here. It is no "ground of offence" to me whatever. I look at the question simply as a matter of business. As an exhibition variety a saw-edged Carnation is absolutely valueless. The American Carnations, from the fact that the two countries England and America, look at the flower from two different points of view, are, commercially speaking, of no use whatever in England.—H. V. WEGUELLIN, *St. Mary Church, Torquay*.

### NOTES ON HARDY PLANTS.

**Aster spectabilis.**—I have only just had practical explanation respecting the garden qualities of this distinct species. For instance I have in these columns said repeatedly that the flowers are true to the name of Michaelmas Daisies by coming into bloom at the latter end of September, and further, that the flowers are fine blue, or rather a fine blue-purple, and my eye the nearest to a true dark or Oxford blue of any of the Michaelmas Daisies. I have heard from various correspondents that in these respects—timely flowering and deep blue colour—their experience of the plant was quite opposed to my statements, and I felt either someone's material must be wrong or someone must be colour-blind, and I tried to get over the difficulty by procuring plants from several sources which they seemed to contradict my plant. Looking round at the first real show of the Starworts, September 27, I saw a medley of form and colour in one group, where I at once recognised my favourite form of *spectabilis*. It would seem from this that at least three vars. under the same name, from three sources, flowered Michaelmas, but the colours were as different as could be, and the deep blue I have always known and which I procured from the Edinburgh gardens at least ten years ago, was not only vastly superior, but the only variety worth a place in the garden. From these facts I do not wonder that correspondents had such a poor opinion of *spectabilis*; to say the least, if their plants are true to name, they must be inferior varieties of the species.

**Alpine Strawberries** fruiting in October are to near the end of the year are among the most pleasing of all rock garden plants. This long season of fruiting is due to a peculiarly persistent habit and also to the great variety of kind, including European and Himalayan species. In its turn the variety, as regards the fruits, the size, colour and shape, is one of the most charming features where the varieties are grown and kept separate. The deep, rich, fresh colours of the fruits are refreshing to sight as well as taste. I find these to fruit nowhere so well as on a part of the sunny rock garden, and though it may seem questionable whether such a position is not too costly quarters for such rampant growers, we may come to present facts, and ask, What prettier in the autumn?

**Euphorbia pilosa** is equally attractive in the autumn as in early summer. The young growth is of a rich and conspicuous yellow, practical

whole plant, so that the yellow flowers can be distinguished close to. Later the plant becomes more like other plants, but to change in the autumn. Now the leaf tints are rich to the extreme—yellow, brown and bronzy scarlet, and a group of half a dozen plants 1½ feet high and 4 feet or 5 feet through makes an effective show. I have lately met with a variety called *P. grandiflora*. This is a name one never likes to use without good authority, but in this case there is certainly a larger and nobler type of plant to warrant the name, and, what is better, I find it more vigorous under culture.

**Pyrethrum uliginosum.**—The uncertainty of this doing well year by year is pretty well known. There is a way of dealing with it on which you may depend for a crop of fine flowers every autumn. It is to divide a number of the thickly matted roots every year in April. At the second year these are at their best, but generally the first autumn there will be a good show of the white heads if the summer has been favourable. By this plan you get a succession of strong plants and a longer season of bloom.

Yoodville, Kirkstall.

J. Wood.

### MIXED FLOWER BORDERS.

The accompanying illustration shows the pleasing effect produced by the informal introduction of fine-foliaged plants into the flower border. In this wide, wall-backed border there is no attempt at monotonous regularity; the Yuccas stand boldly, at different heights, from the flowers, while, further down, the thick foliage of an evergreen, spreading out to the box-edged verge of the path, makes an artistic break in the continuity of the view, temporarily shutting out the arrangement of the border, which becomes visible again in the distance.

This mingling of flowers with fine-foliaged plants, and here and there with shrubs, is often most effective, the courses of the former being set off to the best advantage by the noble or graceful forms of the latter, while they, in their turn, derive additional charm from such environment, their contour and striking outlines being most clearly defined when rising from a floral base. A clump or two of the Giant Reed (*Arundo donax*), a hardy Palm, or a few plants of one of the Yuccas or Dracenas at once give a character to an informal flower border, which may, with good effect, be broken at intervals by Pampas Grass (*Glycerium*), New Zealand Reed (*Arundo conspicua*), clumps of the Plume Poppy (*Aconita cordata*), which grows to a height of 7 feet, some of the larger shrubby Spiraeas, such as *S. Lindleyana* and *S. arifolia*, the Venetian Sumach (*Rhus cotinus*), or some of the more graceful of the Bamboos. These subjects, when given ample space, such as is available in a border similar to that seen in the engraving, assume their characteristic forms in a manner impossible to them when relegated, as we so often see them, to the crowded shrubbery, while with their varied heights they improve the appearance of the border, as a whole, by preventing any idea of stiffness and forming an admirable foil for the flowering plants with which they are associated.

S. W. F.

ties showing much diversity: they are useful for cutting, and last in a cut state. If anyone will take the trouble to save a little seed from one or two of the best types, and sow it, the result is sure to be quite satisfactory.—R. D.

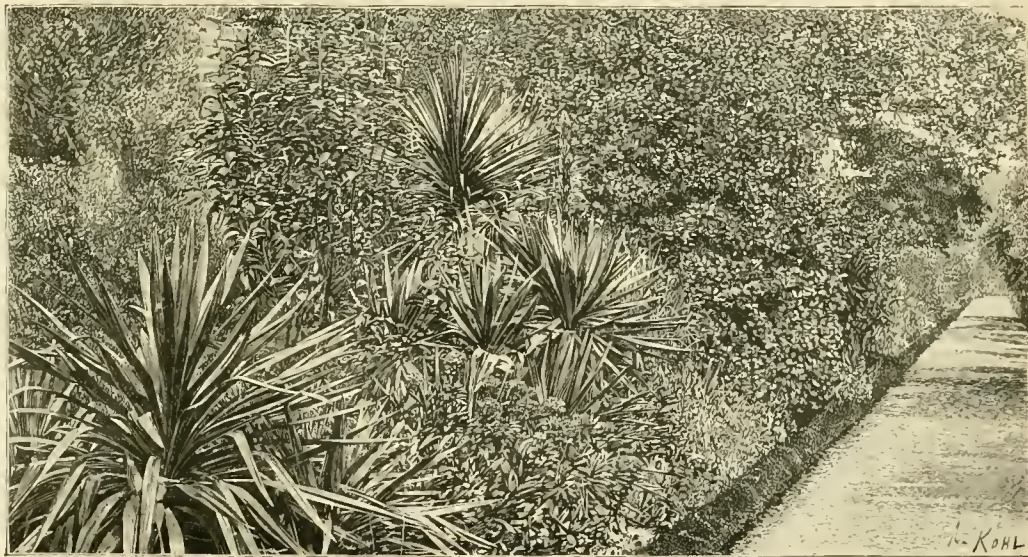
### ROOTED CARNATION LAYERS.

THESE should be potted off without delay, especially from plants layered in the open air, because they are exposed to the danger of having the soil washed away from their shallow roots by the heavy autumn rains. Some growers who cultivate only in the open ground may contemplate planting out in beds at once, in which case the soil should be deeply dug and made as fine as possible, and, unless there is reason to think it is poor, there is no need to add manure, especially any of a rank character, as it may lead to canker and other evils. With care the rooted layers can be lifted with some soil adhering to their roots, and if some fine compost, made up of good loam finely sifted, leaf-mould, and rough sand, be placed about the roots, they will get to work much more quickly. Any fresh loam which may be employed should be carefully looked over for wireworm, and in digging the ground any found in the soil should be at once destroyed. A light soil can be made heavier by the addition of some strong loam of a clayey character to give it substance, as Carnations do better in a fairly

part of the spring they were planted out rather later than is desirable. The recent rains and cold nights were marrying the purity of the flowers, and this fact makes early planting out all the more desirable.—R. D.

**Cactus Dahlia Fire King.**—This is one of the most useful scarlet Cactus Dahlias I know. The plant is a very vigorous grower, and has done well with me in this not one of the best of seasons and in light, warm soil. Many of the otherwise good Cactus Dahlias have their blooms partially hidden by the foliage, which is a great drawback, at any rate where they are allowed to remain on the plants. Fire King is one which shows its flowers off to advantage, and so is good for either purpose. It is very easy to over-water Dahlias, this having the effect of making them run up tall and show few blooms. Mulching is most useful, and the neglect of it incurs more labour with the watering-pot, with in the end less satisfactory results. Old Mushroom manure, leafy refuse, or even lawn mowings answer the purpose, the two first being preferable.—C. C. H.

**Lilium Wallacei.**—Some Lilies increase rapidly by division of the bulbs, while others make but very slow progress in this way. One of the most prolific of all in this respect is *Lilium Wallacei*, a small-growing Lily, bearing a great general resemblance to some members of the *elegans* section. The bulbs, however, divide



A mixed flower border.

heavy soil than in a light one. If the soil is of an adhesive, clayey character, then it is well to lighten it. Old mortar rubbish, wood ashes and finely-sifted cinder ashes, long straw manure, cocoa-fibre refuse, half-decayed leaves and such-like will all help to lighten it, and to some extent act as fertilisers. When a bed is formed in the open at this season of the year it is well to raise it 6 inches or so above the level of the surrounding land, as water from autumn and winter rains will not so readily gather about the roots. The plants should be from 15 inches to 18 inches apart, according to their vigour, and if any of them—and this applies more to old plants than to young rooted layers—have long, loose shoots, they should be pegged down to prevent injury from rough winds.

R. D.

**The Tuberose in the open air.**—I saw a few days ago quite a large patch of Tuberoses which had grown freely and flowered finely in most cases; it was in the flower garden at Fanham Hall, Ware. They were in the open, but sheltered all round and at no great distance. The gardener said that owing to the dry weather in the early

naturally with great freedom, being quite unlike those of *L. elegans* or any of its varieties, but *L. concolor* behaves much in the same way. *L. Wallacei* is a very pretty Lily with orange-red flowers, borne about the end of July. It is not at all a common Lily, and is not sufficiently vigorous to hold its own with some of the more robust members of the genus. A coloured plate was given in THE GARDEN for January 30 of the present year, but the flowers are not drooping as therein depicted. The general appearance of a flower is, however, well shown. *L. Wallacei* is a native of Japan, and has been known in this country for about twenty years.—H. P.

**Dahlias.**—The fact that a frost of 8° was experienced on the morning of October 7, and completely settled all Dahlias in the open ground it was not possible to protect, just at a time when they are in great request, leads to the suggestion that another season a certain number should be planted in a position where they may be easily and effectually protected at any sign of frost, and so prolong for two or three weeks the season of flowers that cannot be replaced by hardier things. Good forms of the Cactus and decorative types,

**Single garden Marigolds.**—A bed of these is now a pleasant sight. The double and single types both are delightful autumn flowers, because they bloom freely all through the late summer and autumn months. I have some pretty single varie-

always the most acceptable for cutting, cannot well be protected on the open border. They throw the flowers well above the foliage, and grow under good culture to a very considerable height, so that anything raised above them in the shape of tiffany is very liable, should the weather change suddenly in the night, to be found at a distance from the plants in a rather mutilated condition. I have decided to reserve for some of them in future seasons a portion of a south-east border under a wall in a sheltered slip garden. A few upright poles will be placed along the outside of the border nearest the walk, and cross pieces nailed respectively to these and to the wall, so that any shelter afforded can be secured to the same and rolled up during the day under the wall; plenty of head room will be allowed, as the majority of varieties under consideration go up with good cultivation quite a foot higher than the height given against their names.—E. BURRELL.

#### WINTER VIOLETS.

I do not remember a finer lot of plants than those lifted this year for winter work, alike in size, in flower already developed and yet to come, and in immunity from red spider. This is in a great measure owing to the fact that we have had a summer with a rainfall rather over the average, and especially that the plants had the benefit of one or two thorough natural soakings soon after they were placed in summer quarters. So far as the preparation is concerned, I find with our light, dry soil that two things are indispensable—viz., good plants to start with, and a west or north-west border for planting. For several seasons the runners, with the tiny rootlets just showing, were dibbled into the open border where they were to remain, but the better plan is to insert them in a frame for a few weeks, and then to transfer to the summer border. Here they are planted 1 foot apart each way, the only preparation being to fork in a fairly good dressing of well-decomposed manure. A mulching of peat Moss or spent Mushroom manure is put on at once, and an occasional soaking given if the weather is hot and dry for a time after planting. Summer culture is simply to keep the bed clean, to nip off runners and to keep a sharp look-out for red spider. This pest has not been troublesome this year, but in hot, dry summers it is strongly in evidence, and with plants close to the surface of the ground remedial measures in the shape of insecticides are hardly practicable. The best preventive of future attacks is to mulch well with fresh horse droppings, breaking them small and packing well under the foliage, following the same with (in the evening) a thorough soaking of water. Why the fumes of ammonia that rise with the moisture that settles on the foliage should be so objectionable to the insect I cannot say, but I can recommend the remedy to all who are similarly troubled. The agency of the ammonia fumes being answerable for the clearance is testified by the fact that soakings of water without the mulching are not effective. When a considerable number of flowers is open, and buds in an advanced stage are plentiful, great care is necessary in the lifting. Cutting round should be practised at a fortnight and a week previous, and the plants taken up with a good ball. I house the winter Violets in pits where Primulas and similar plants have been standing through the summer months, and the soil from which has not been removed for years. Trenches are taken out slightly wider and deeper than the plants require, and they are placed in these at a sufficient distance to allow a very little space between the outside leaves. For a filling-in compost I mix three parts stiff roadsidings and one of horse droppings, and this is tightly packed both at the base and sides; a heavy watering follows, and the plants are shaded with a bit of tiffany for a few days if a spell of sunshine follows the planting. Plenty of air and the exclusion of frost are the secrets of successful winter treatment. If the pits are not heated, mats or dressed covers should be placed over them

in sharp weather; a little air both at back and front is, however, always necessary. If no special sorts are required in size or colour, the two best and most reliable Violets respectively as double and single are Marie Louise and Wellsiana. If there are any better I shall be glad to hear of them. E. BURRELL.

Claremont.

#### SEPTEMBER IN SOUTH DEVON.

DURING the past month 3.09 inches of rain fell on 15 days against 5.45 inches on 28 days in September, 1896, the average for the month being 2.39 inches. Three years ago we had a phenomenally dry September, for in that year the rainfall amounted to only 0.01 of an inch. The total fall for the nine months of the year amounts to 26.93 inches. During the same period of 1896 not much over half this quantity fell, the record being 14.62 inches. At the present, indeed, we are over 4 inches above the average for the first three quarters of the year, which stands at 22.63 inches, the total rainfall up to the present having been 26.93 inches. The month has been tolerably bright, the sun having shone for 156 hours 35 minutes, against an average of 157 hours 50 minutes, while in rainy September, 1896, only 105 sunny hours occurred. For the nine months already elapsed the sun has shone for 1495 hours 35 minutes, the average being 1478 hours 45 minutes, and the record for the preceding year 1469 hours 25 minutes. The year, up to the present, has therefore been rather above the average in sunshine, while 1896 was below the average. The mean temperature for the month (56.1°) is nearly 2° below that for September, 1896, viz., 57.9°, and the average for the month, 58.0°. The highest sun reading for the month was 115.2°, and the highest screen reading 66.5°, while the lowest reading in the screen was 42.0°, and the thermometer on the grass never fell below 31.0°, which it registered on the 19th. The total horizontal movement of the wind was 6291 miles compared with a record of 8689 miles in September, 1895, which was a particularly boisterous month and very different from September, 1895, the calmest month for two years, when the wind movement only amounted to 3175 miles. The greatest daily movement in the past month was 553 miles on the 5th, while the highest hourly speed occurred between 4 and 5 p.m. on the same date, when a rate of 33 miles per hour was registered. In September, 1896, the speeds were as high as 784 miles in 24 hours and 46 in the hour.

We have been fortunate this year in escaping the gale which wrought such havoc in the gardens on September 25, 1896, when almost all of the tall herbaceous plants were levelled to the ground. Now the garden is bright with perennial Sunflowers, Michaelmas Daisies, Dahlias, Japanese Anemones, and scarlet Lobelias, while the Virginian Creeper is fast assuming a crimson tint, and here and there the topmost boughs of the tall Elms show a tinge of yellow. With the latter days of August the swifts left us, the swallows following suit in mid-September, while by the end of the month most of the house martins had taken flight, bearing with them the last reminder of summer hours. An autumnal air pervades garden, field and hedgerow. The Old Man's Beard hangs in grey festoons from the branch and garlands the red rock, and on every side are indications that the year is settling to its rest. In

#### THE WILD GARDEN

the Acanthi have produced their lofty spires of bloom, the strongest grower being *A. mollis*, some of whose flower-stems have attained a height of 8 feet, while the spikes of *A. spinosus*, with its deeply-cut leaves, rarely exceed a height of 3 feet. *Achillea ptarmica* fl.-pl. The Pearl is still in flower, and its long-enduring blossoms will last in beauty through a portion of October, while the light blue of *Agathea cœlestis* is still in evidence. Of the perennial Asters or Starworts, a number are now beautiful, of which *A. Amellus bessarabicus*, with its large lilac-purple blooms, is

one of the best. This variety is not such a rampant grower as many of the others, which, with difficulty kept within bounds, and is, therefore, well adapted for situations where a kind of increase rapidly from the root-stock would be out of place. Three good whites, *A. Novi-Bel Harpur-Crewe*, *nivens*, and *polyphyllus*, have been in bloom, the first-named variety being trifle the earliest, but all three will be far past their best before the later, darker-colour kinds are in full beauty. Of these, *A. N. Archer-Hind*, with purple-blue flowers, is but just expanding its blooms, while *Pluto* and *Flora*, two good dark-flowered varieties, have but just commenced to flower. The handsome *Robert Park* also one of the *Novi-Belgii* section, is in flower and very beautiful it is, growing as does to a height of 6 feet and more, its grace shoots studded with large pale lilac blossoms. The well-known variety *A. diffusus horizontalis* so common of old in cottage gardens, is also in bloom, but, in comparison with the more attractive sorts now in commerce, is of little value for a decorative point of view. Another variety of merit with in the gardens of the poor, *A. linoxy* sometimes known as *Chrysocoma linoxyris*, is still more generally as *Goldlocks*, is a September bloomer, its flower-heads forming a mass of bright yellow during that month. The dwarf *A. diffusus* has been in profuse bloom during the month and has considerably exceeded its usual stature. This variety is seemingly more appreciated by the lepidoptera than are others of the *Starwort* family, as often many butterfly, red admiral, peacock, and tortoise-shell, as well as a good quantity of the brown gamma moths may be seen settled on its blooms, when but few are to be found on other varieties. With the honey-bee is also an especial favourite. The charming *A. ericoides*, with its numberless minute white stars, is fast approaching the zenith of its beauty, as is *A. cordifolius elegans*, which is much still in habit of growth, though varying in the colour of its blossoms. *A. puniceus pulcherrimus* very handsome *Michaelmas Daisy*, growing to 5 feet high and being of vigorous habit, its flowers when first produced are of a faint tint, but soon assume a white colour. They are borne in the greatest profusion, the shoots being literally smothered in blossom. *Aster Novæ-Angliæ ruber* and *Melpomene*, the former a dark red, the latter deep purple, have also commenced to display, and the late-flowering *Aster grandiflorus* has already expanded some of its large purple golden-centred blossoms. This is a superb variety, but is usually so late in blooming that it runs considerable risk of being cut by the frost before reaching perfection. In warm, sheltered situations in the south-west, however, unless exceptionally cold weather occurs in October, it usually matures its flower-crop unharmed.

The white *Anemone japonica Honorine Jobert* has been beautiful throughout the month, and grows very strongly, reaching a height of nearly 6 feet in moist situations. The flesh-coloured variety is also pretty and much preferable to the darker-tinted magenta-red. *Belladonna* does well in the south-west, and many a long list to be seen in full bloom in front of the glasshous on a September day, their light pink flower-seeds arising aloft on the dark chocolate stems—a pretty colour contrast. The tuberous *Begonias* are not so lovely than ever, and leave not an inch of ground visible between their leaves, their vivid colours and those of the new race of *Cannas* rendering the autumn garden brilliant on sunny days. Although recognising to the full the beauty of these large-flowered *Cannas*, one has a strong liking for an old favourite, *Canna Elmendorfii*, whose drooping rose-pink flower-seeds is now very charming, and whose broad, M-like leaves are most effective in sub-tropical gardening. *Campanula carpatica* and *C. turbinata* have both been blooming sparsely, while *Cybele* and *Herberti* blossomed well into the month. Dahlias have made a great show, there being many new *Cactus* varieties of fine form and colour, in some of which, however, the flower

ough beautiful when cut, fail to show above the foliage when in growth, a bad fault, which renders them useless for garden decoration. The second coming of the light blue Delphiniums has proved a welcome tint, and flowers are still to be met from *Erigeron speciosus*, which has been in bloom since early June. The little Mexican Daisy (*Erigeron mucronatus*) is as long-suffering as the former and is still producing its simple flowers. The Marguerite Carnations are pretty at this season of the year, the tone of their abundant leafage contrasting well with the green of the grass and with the pinks, scarlets, and whites of their own blossoms. A few bright crimson blossoms mark a bed of *Dianthus Napoleon III.*, as do some large golden stars, the spot where *Doronicum plangeum excelsum* was a sheet of bright yellow early in the year. These *Doronicums*, if lifted and placed under glass, are very useful for the production of bloom in the early spring. The *Millardias* still make a brave show in their scarlet and gold, and *Geum coccineum* has here and there a few open blooms, while a near relative, the *Waterlens*, is producing quite a quantity of autumnal wens. The Cape Hyacinth (*Galtonia caudicans*) has been a charming sight through the early part of the month, but is, unfortunately, not so lasting as we could wish, its white bells, though opening in succession, fading rapidly. The grey-white pom-spikes of *Funkia ovata* possess a suave aroma of their own, in striking contrast to the brilliant great flower-heads of *Erythrina cristallina*, some almost 2 feet in length, and reaching a height of over 5 feet from the ground. These are handsome when arranged in a tall jar, but care must be taken in handling them, as they are armed with sharp, sickle-shaped thorns that are capable of inflicting a deep score, especially upon male hands. *Hedychium Gardnerianum* has been in bloom in the garden, but a sunny position requisite to ensure its flowering. It is generally stored under glass during the winter, and planted out in well-prepared soil in the month of May. The perennial Sunflowers have been, as usual, among the brightest of September flowers, *Helianthus multiflorus* and *H. rigidus* Miss Mellish being the most effective; whilst a line of *H. giganteus* that tops a fence at the garden end is, with its (I) fringe of light yellow, a striking sight. *H. multiflorus* and its varieties, as well as *H. rigidus* (the type), were at their best in August, when the fallows loved to hawk over the broad bank on which they grew, for the golden glow was ever armoured with insect life. The *Hydrangeas* have been masses of bloom, but the tints are now rapidly becoming sere, and only the remembrance remains of the heyday of their beauty. The *Hippophaes*, however, are still brilliant here and there, while the last of the *Lilies*, *L. tigrinum* (the type), while preserving its character as a September bloomer, shed its last blossom ere the second week of the month. *Lobelia fulgens*, though having been in flower since the end of July, is still brilliant, and will continue to make a spot of vivid colour in the garden for some time to come. *L. rosea* is also still in bloom, as is the (I)-tinted *L. sylvatica*. A few *Montbretia* blossoms show out at long intervals in the borders, their bright orange-scarlet serving as a reminder of the brilliant display the thick sheaves of flower-spikes made not many weeks since. The *Fennel-leaved Matricarias* are still in bloom, and self-sown seedlings of *Nicotiana affinis* have taken the place of earlier matured plants, and, with the ever-strengthening daylight, open their blossoms as soon as the sun is off the border. A bed of *Oxalis flabunda rosea* remains bright, and the *Paris Lilies*, yellow and white, now grown to huge bushes, are studded with their star-like flowers.

*Plumbago Larpenae* has covered a large expanse of rock and has invaded much of the surrounding ground, but, seeing its beauty in the latter part of the year, one is loth to disturb it. A few *Poppies* have perfected infrequent blossoms, notably the Iceland and Welsh *Poppies*, which now and again a pale apricot bloom of *Papaver pilosum*, whilst one splendid blossom of *P. bracteatum*, a relic of the lost summer, has ex-

panded perfect petals of vermilion. The Ivy-leaved *Pelargonium* *Alme. Crousse* and *Souvenir de Charles Turner* still mask the rough stone edgings with salmon and cerise, and the spikes of *Phygelius capensis* bear at wide intervals their crimson blooms, while *Polygonum capitatum* has not yet ceased its flowering and the *Pentstemons* are still gay. Of the *St. John's Worts*, *Hypericum Moserianum* and *H. nepalense* are in bloom, and a scarlet *Helianthemum* has a fair amount of blossoms. The *Everlasting Flowers* (*Helichrysum*), though stiff in form, are bright in colour, and appear to advantage when the autumnal days have obliterated so much that is beautiful in the garden. (*Oenothera Lamarekiana* has been in flower through a great portion of the month, while the herbaceous *Phloxes*, though not emulating their summer display, have perfected many heads of bloom. The *Winter Cherry* (*Physalis Alkekengi*) is now approaching the zenith of its beauty, and its vivid orange calyces glow brightly among its leafage. This is very useful for indoor decoration, the calyces remaining in perfection for many months. The graceful *Pyrethrum uliginosum* is now in full flower, its wide-rayed white stars, borne on tall, slender branching stems, being most acceptable for arranging with the darker coloured *Starworts*, for by the time this *Pyrethrum* is in bloom the majority of the white *Asters* are past their best. *Rudbeckia Newmani* is a breadth of gold, and is at its best early in September, by which time *R. purpurea* is declining in effectiveness. The scarlet *Salvia* and *Salvia patens* have both been lovely during the month. The former usually endures the winters here without harm, and I have known *S. patens* to pass two winters in the open without protection. The latter is, however, so valuable for its colour, that it is always well to lift and store it rather than risk its loss. *Scabiosa caucasica* has produced a few of its beautiful light blue flowers, and *Sedum Sieboldi* is fast approaching perfection. At the commencement of the month the *Golden Rod* (*Solidago ambigua*) was in bloom, and *Stokesia carynea* has now unfolded its large purple blossoms, while *Tradescantia virginica* and *Zauschneria californica* are both in flower.

#### THE TEA ROSES

have been very lovely throughout the month, and many a charming bouquet of these fair flowers has been gathered. Two especially beautiful new introductions are *Queen Mab* and *Souvenir de L. Guillot*. Both are much similar to *Irene Watts*, of which I made mention in an earlier note, and have in their petals salmon, apricot, orange, yellow and rose delicately blended. Like the beautiful *Ma Capucine*, they are only valuable in the bud or half-opened bud form, as when fully expanded they are too single to appear at their best. The single white *Macartney Rose* has been in bloom since the end of June, and will continue until the weather becomes too cold for the chaste white blossoms to expand.

Of shrubs, *Choisya ternata* and *Cytisus fragrans* have come into second bloom, while in the early part of the month *Escallonia montevidensis* had its blossoms thronged with butterflies. *Hibiscus syriacus* has been covered with multitudinous flowers, and the shrubby *Veronicas* are in bloom. The *Sea Buckthorn*, with its grey-green foliage and orange berries, has been very ornamental, and the *Pampas Grass* has reared its tall plumes aloft on slender shafts, while *Aralia spinosa* has flowered well. The large standard *Magnolia* still bears its fresh, ivory-white chalice daily, and, from the number of buds still swelling, will bloom throughout October if not checked by frost.

Of climbers, I saw lately a large plant of *Abutilon vexillarium* in good bloom, and a fine *Plumbago capensis* growing against a cliff in a sunny, sheltered position is a mass of light blue flower-heads. Near to the latter is a large expanse of *Physianthus albens*, whose flowers are now fading, but which has produced a quantity of great seed-pods. *Solanum jasminoides* has been more lovely of late than earlier in the year, as the *Ampelopsis*

*Veitchi*, which surrounds and intermingles with it, has turned a deep crimson, which colour contrasts with the white flower-clusters, creating a most charming effect. Of *Tropaeolums*, the *Canary Creeper* (*Tropaeolum canariense*) has spread a golden trail over old walls and amongst the Ivy and evergreens, and the scarlet *Tropaeolum Lobbianum* has painted rock and trellis with vivid colour, while *T. tuberosum* is just commencing to flower, fully a month later than in Dorsetshire. I find it impossible to get early blooms from this *Tropaeolum* in my garden, even when the tubers are started in heat and planted out after good growth has been made.

Many annuals have added to the brightness of the garden during the month, the chief being blue *Cornflowers*, *Coreopsis lanceolata* and *C. sanguinea*, *Eschscholtzias*, *Marigolds*, *Prince's Feather*, *Salpiglossis*, *Scabious*, scarlet *Zinnias* and *Sweet Sultans*. S. W. F.

## TREES AND SHRUBS.

### THE VERY LARGE-FLOWERED HYDRANGEAS.

It is more particularly concerning *Hydrangea Otaksa* var. *monstrosa* that I wish to say a few words. *Hydrangea Otaksa* was introduced from Japan by Siebold about the year 1868, and was considered remarkable for the size of its clusters of flowers, but the variety *H. O. monstrosa*, which was put into commerce a few years since by M. Lemoine, of Nancy, is much superior to it, its large pink flowers, produced in terminal globular cymes, sometimes forming clusters of huge dimensions. The leaves are opposite, broad, and deeply serrated.

Like the common *Hortensias*, this plant cannot exist permanently in the open air without shelter, in the climate of Paris, at least during severe winters, but in the west of France the finest *Hortensias* are grown entirely unprotected in the open air. I have had the opportunity of seeing in the garden of an amateur at Viry, near Paris, a dozen clumps of *Hydrangea Otaksa monstrosa* which were most remarkable for size and general vigour of growth, and bore flower-clusters of extraordinary size, some of them which I measured being more than a foot in diameter, on branches which were over 3 feet high and nearly an inch in diameter. Some of these clumps, each of which was composed of two plants, were showing at the same time from five to eight flower-clusters of the same dimensions, while on other branches they bore clusters in a less forward stage of development.

These *Hydrangeas* were growing in tubs 2 feet in diameter and 1½ feet high, formed of barrels cut in two and placed on an open terrace in the full sunshine. Each tub contained two plants in a clump set in good heath soil. The bottoms of the tubs, being pierced with holes and well drained, permitted water to escape easily. These plants are stood in the *Orange house* at the approach of winter. In spring (May or June) they are put out of doors in the full sunshine and are then watered regularly and copiously, each tub receiving on an average about two gallons daily. No manure is used in the soil. When growth is commencing the branches which have borne flowers are cut back to one or two strong buds next the base, and not more than five or six branches should be retained on each plant, so that the clump of two may have ten or twelve branches which will bear flowers at their extremities. All other branches are to be suppressed, and all lateral shoots that may push are to be pinched out as they make their appearance. Every two or three years it is necessary to re-tub the plants

in order to renew the soil, and at the same time to divide the clumps and trim up the individual plants to improve their appearance if needful. From the foregoing it is evident that, contrary to what is generally supposed, *Hydrangeas* can be grown in a condition of vigorous health in the full sunshine, and that their flower-clusters may attain unusually large dimensions without the application of any special manures. All that they require is suitable soil, a sufficient supply of water, and judicious attention in the matters of pruning and disbudding. *Hydrangea Otaksa monstrosa* is easily increased from cuttings taken from the flowering branches; these cuttings will produce low-sized or dwarf plants which at blooming-time will be crowned with flowers, presenting the appearance of an immense roundish cyme.

Another species of *Hydrangea* (*H. paniculata grandiflora*) introduced from Japan in 1864, and also put into commerce by M. Lemoine, produces very large flower-clusters which might be termed prodigious, as they take the form of great, elongated panicles at the extremities of vigorous-growing branches. This variety of *H. paniculata* has, like the typical species, the advantage of being very hardy in the open air, and forms a shrub which may attain a height of 4 feet 10 inches or more. Its leaves are opposite or, more frequently, arranged in whorls of three. It is one of the most noteworthy subjects, and yet up to the present it is but little grown. The flower-panicles which it produces are large in proportion to the vigour of the plant and the favourable conditions under which it is grown. It requires a soil that is free from lime, light, moist, and largely composed of vegetable mould. It is also necessary that, by pruning and pinching, according to the strength and vigour of a plant, not more than from two to six flowering branches should be allowed to grow upon it. These will then produce panicles of flowers 1 foot 8 inches long or more and 10 inches or more in diameter at the base.

The regular flowering time of these *Hydrangeas* in the open air is from July to the end of September. They are, therefore, especially to be recommended for the autumnal floral display in gardens. They are also very easily forced in hothouses, so as to flower through the winter and early in spring. What is commonly called the flower in *Hydrangeas* is in reality the calyx, the sepals of which assume a petaloid character, growing to a great size at the expense of the other floral organs, the corolla and stamens, which sometimes even disappear entirely.—A. CHARGUERAUD, in *Revue Horticole*.

#### THE MAIDEN-HAIR TREE.

The Ginkgo was first made known by the German botanist Kaempfer, who discovered it in Japan in 1690, and in 1712 published a description, with an excellent figure of the foliage and fruit, in his work on that empire. He had found the tree in temple gardens, and believed that it was Japanese, for early European botanists in Japan had to do most of their botanising in gardens, and did not realise that many of the most popular Japanese garden plants had been brought from China with the Buddhist religion. Among these introductions was the Ginkgo, which grows nowhere indigenously in Japan, although it is now found in most temple gardens both in China and Japan, and it is possible that this once widely-distributed type has only been preserved by cultivation; for if we are not mistaken, the Ginkgo is nowhere known in a wild state. The unusual power of this tree to bear cold and

drought would indicate that it has long inhabited some region with a severe continental climate, and if it exists now at all outside of gardens it is probably in some of the elevated districts of Western China or of Mongolia, or on the still unexplored mountains of Northern Corea.

In old Japanese temple gardens the Ginkgo is frequently 120 feet high, with a tall massive trunk 6 feet or 7 feet in diameter and large drooping limbs sweeping out in wide-spreading graceful curves. Such trees are impressive objects, especially in autumn, when the leaves which flutter on their long stems assume the colour of gold. Ginkgo biloba, which is also sometimes called *Salisburia*, and by English-speaking people the Maiden-hair Tree, was introduced into the Botanic Garden at Utrecht about 1730. A male tree flowered in England as early as 1795, but it was nearly twenty years later before female flowers were seen, De Candolle discovering them in 1814 on a tree at Bourdigny, near Geneva. Scions from this tree grafted on a staminate plant produced in 1835 perfect fruits in the Botanic Garden at Mont-

in height from 2 feet to 3 feet in a year. Nurserymen propagate a variety with leaves which are larger and more deeply divided than in the type, and others with slightly pendulous branches and with leaves striped or blotched with yellow but none of these varieties have much to recommend them.

The yellow flesh of the Ginkgo fruit has most disagreeable, rancid flavour, but the seed kernel, which resembles the kernel of the Almond, is sweet and palatable. In China the trees are cultivated for the fruit, which is sold in great quantities in all markets, but in Japan where the fruit is also gathered and sold, the trees are cultivated for ornament only, and usually only in temple gardens. The wood is bright yellow with a close compact grain, and is capable of taking a beautiful polish; it is however, soft and easily broken, and is not considered particularly valuable.—*Garden and Forest*.

**Tamarix chinensis.**—This is admitted to be the best of the genus, and is found in some localities as *T. japonica* and also *T. plumosa*; the latter



A bowl of single-flowered Tree Peonies.

pelier, and fruit-bearing trees are now common in Europe; in the United States they exist in Central Park, New York, in Germantown, Pennsylvania, near Louisville, Kentucky, and probably in many other localities. In the United States the Ginkgo is perfectly hardy as far north as Massachusetts, and thrives as well in the south as it does in the north. There are not, however, any very large or fine specimens in this country, although the tree planted nearly a century ago in the garden at Hyde Park, on the Hudson River, has begun to assume mature habit and shows that later generations may hope to see Eastern America rival Eastern Asia in its Ginkgo trees.

The Ginkgo is very easily raised from seeds, which can now often be purchased from dealers and which retain their vitality for several months, and female plants, which are less common than males, may be obtained by grafting; it is easily transplanted and thrives in deep, rich drained soil, in which it will often increase

name is suggested by the dense, plume-like habit of growth and panicles of flowers, which are bright pink in the buds and turn to paler pink when expanded. I have found this genus extremely easy of propagation. It is an easy matter to prune time to cut the smaller twiggy growth into lengths of a foot and put them into the ground at the border the greater part of their length. Most of these will grow if the season is favourable. In a greenhouse is available the cuttings may be inserted in pots earlier in spring, and the plants thus started will be much stronger at the end of the first season and should flower the second year. In the year 1893 M. Lemoine sent out a new species called *Tamarix kasegharica*, which was raised from seeds collected in Central Asia. This flowers in September and has proved to be a good and distinct plant. It was afterwards found to be but a form of *T. hispida*, which has a very wide range geographically. Indeed, the genus has a very wide distribution. *T. gallica* is found all along the Atlantic shore of France; *T. indica* is a native of the East Indies; *T. tetrandra* comes from the Crimea, and *T. g-*





...nica is distributed over a great portion of the ... rope, among the mountains and along the river ... ks.—E. O. ORPET, in *Garden and Forest*.

GARDEN FLORA.

PLATE 1141.

TREE PEONIES.

WITH A COLOURED PLATE OF A SINGLE TREE PEONY.\*

Among the beautiful flowers of early spring are the Tree Peonies, as the sub-shrubby *P. Moutan* with its host of gorgeous and inimitable varieties is called. Beautiful as these Tree Peonies

back in this direction, a good depth of loam answering all their requirements. Perhaps the most important item in their successful cultivation in the open garden in Britain is that of

POSITION,

which is even more important in southern countries than in the north. This is due to the occasionally severe as also late frosts in spring, which injure the young growths and disfigure the flowers. The position for these plants should be decided upon with care for two reasons, viz., on account of the spring frost nipping the young shoots, and, secondly, because of their impatience at being disturbed when once planted. To attempt to grow Tree Peonies

affecting the plants. As the plants were nicely established, each year saw a beautiful display. In much the same way may choice shrubs be utilised in private gardens where these *Moutan* Peonies are grown. The gentle slope suggested above is not in any degree essential to success, yet it is in such a position, provided also a good depth of prepared soil is given, that the plants are generally more quickly established. In the more favoured parts of the British Isles these Peonies may be planted in almost any position where a good depth of soil is obtainable, and in these places it is not easy to predict the size to which the plants will attain in the course of years. Coming into flower so early in the year, it is impossible to over-estimate their value, for



A double-flowered Tree Peony.

undoubtedly are, it is only rarely we see a collection or even a selection of them in any garden. There are no other flowers in the early spring that can in any degree compare with them. Nor can it be urged that they are unknown, seeing that quite large collections have been grown in some of the leading nurseries during the last twenty years. Flowering, too, here all else in this noble family of hardy plants, a few groups would make a goodly show in any garden in the early spring-time. These plants, moreover, in common with the group to which they belong, present but few difficulties to the cultivator, none of which are insurmountable. Being perfectly hardy, there is no draw-

in positions where much shelter exists naturally is a step in the wrong direction, and should be avoided, as it is fraught with as much danger as is any attempt to cover for protection. The too sheltered position is not that in which the best matured growth is secured, while covering the plants in case of frost is liable to render the growths tender, and therefore more susceptible to injury. Where such exists there is no better position in the garden than a gentle slope with a western or even a north-western aspect. In the latter the growth and bloom are somewhat later, and if only a few days, lateness is important when these trying seasons occur. Many years ago I planted the whole of a very large and choice collection in this way, and with a bank of *Rhododendrons* on the sunny side protection of a suitable kind was afforded without in any way

even in the year or two of the growth and before their flowering is a certainty year by year, there is more than a passing beauty in the many and varied tints of the young and beautiful leaves.

In the matter of soil these shrubby kinds differ in no wise from the herbaceous section; indeed, the whole race of Peonies may be put down not only as gross-feeding plants, but as plants requiring a greater depth of rich soil for their successful cultivation than perhaps any other group of hardy perennials. At the same time it should be remembered that, once planted, they are safe for a dozen or even a score of years, with no other care than an annual mulching of rich material. In common with the herbaceous kinds, the *Moutan* Peonies prefer a rather strong loamy soil, though not retentive or too heavy. In the positions

Drawn for THE GARDEN by H. G. Moon at Gwyte Manor. Lithographed and printed by J. L. Gart.

selected, whether for beds or irregular groups or masses, the original soil should be excavated to fully 3 feet deep, and if the top spit is of good material, this should be set aside and returned. In most gardens there is a heap of old potting soil, together with peat siftings and the like, and this, incorporated with some good fibrous loam and plenty of manure, would make an excellent mixture. Very sandy soils should have a proportion of clay or heavy loam added.

The plants usually obtained in nurseries are about two years old, and grafted on the roots of the herbaceous kinds. Such plants should always be planted with great care, and be buried at least 2 inches or 3 inches below the union. It is also a good plan to thrust a stout piece of wire through the ball of the plant to extend 6 inches above ground, and bound somewhat firmly to the stem to prevent snapping off. A good season for planting is the early autumn, September and October preferred, unless the plants are established in pots, when they may be planted in spring when the flowering is past. In this case a thorough soaking of water will be needed at planting time. But whether planted in spring or autumn, the young plants during the first two years will be greatly benefited by occasional waterings in dry weather, liberal soakings of liquid manure in the heat of summer or twice or thrice during winter not being thrown away. Such a course of treatment may appear elaborate, and to some unnecessary, though it is scarcely possible to err on the side of supplying the richest of soils to these gross-feeding plants. Those who have not space in the garden, or from other reasons cannot grow them in this way, may attempt their culture in pots or even tubs: indeed, as pot plants for the conservatory they are not unknown, though it is to be feared that too often methods foreign to their well-being are adopted to bring the plants into flower, with little or no regard for their future. Where these plants are grown in this way, large pots will be necessary and strong plants to make a successful start, as also the most liberal culture. Artificial heat beyond what is needed for keeping away frost only should be given, taking care that the plants are removed as soon as flowering is past into quarters congenial to the proper maturing of the growth, which is the most important item so far as another season's bloom is concerned. Frequent, that is annual, repotting should not be indulged in, as the plants are impatient of disturbance. That these lovely Peonies are amenable to a generous treatment when grown in pots may be gathered from the fact that in my experience three-year-old plants in pots 14 inches across have produced splendid blossoms nearly 12 inches across in some instances, others of 8 inches and 10 inches diameter being quite usual in the more recent novelties. Equally remarkable with size is the range of colour to be found among these plants; every conceivable shade of colour and many exquisite combinations, together with double, semi-double, and single varieties. These single kinds, one of which appears in the accompanying plate, as well as the semi-double varieties, are largely of Japanese origin. Many of the kinds, while exceedingly beautiful, are also delightfully fragrant.

The propagation of this unique race is largely carried out by grafting on the roots of the herbaceous kinds, usually *P. edulis*, an operation best done during August, and in a cold frame where a close atmosphere may be maintained.

E. J.

**Narrowwater Park, near Newry, co. Down.**—This domain is just now very beautiful, rich in autumn colour, and the visitor is charmed

with the view of Warrenpoint and Carlingford by the fleeting light and shade on the mountains and by the glints of light on the sunlit sea. The crimson *Agaricus muscari* jewels the grass under the trees, and a fine group of *Lobelia cardinalis* Firefly near one of the largest known examples of *Gunnera manicata* is most brilliant and dazzling in its effect. *Tropeolum speciosum* is rampant here with its vivid crimson scarlet flowers and turquoise-blue berries draping bushes and dangling from the Lily stems. One special feature at Narrowwater near the gay flower garden is an Oak tree, up which a plant of common Traveller's Joy has scrambled like a tropical liane, and its glossy fruits now shine like burnished silver in the sun. There is a very large specimen of the richly coloured *Vitis Cœnœtia* in the garden wall just now most effective, as its leafage is changing from rich olive-green to yellow, orange, and crimson, or russet and brown.—F. W. B.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**ASPARAGUS BEDS.**—The tops having become quite matured nothing would be gained by allowing them to remain uncut after this; indeed, their early removal would prove an advantage to allow what sun we may yet have to reach the crowns. The stems should not be cut down close to the surface of the bed, as by leaving them a few inches high they mark the position of the crowns and prevent them being injured by treading or wheeling over them. Having removed the stems, hand weeding is better than hoeing if the beds have become foul, as this does not disturb the surface roots. The question of mulching depends in a great measure on the nature of the soil and the position of the beds. On light and well-drained land, or that of a sandy nature, a dressing of seaweed or well decayed manure may be given with advantage, as there is no danger of the soil becoming waterlogged before spring. A cold and badly drained soil is more often the cause of the roots perishing during the winter than severe frost, therefore it is only increasing the evil on such ground to add a thickness of manure on the surface, as this prevents both wind and sun acting freely on the ground, and excess of moisture cannot pass off. It is usual with such soil to form raised beds to ensure drainage, and where these are a foot or more above the natural level a slight dressing of seaweed or manure may be given, and if some is packed round the sides of the beds it prevents to a great extent severe frost striking to any great depth into the ground. For heavy land, compost of a light and porous nature, such as the edgings from roads which contain plenty of grit, burnt wood and other vegetable ashes are also beneficial.

**FORCED ASPARAGUS.**—With a good plantation of roots to draw upon, this delicious vegetable is obtained far more easily and at less cost than French Beans during the winter if only a warm greenhouse or pit is available. A certain portion of the oldest beds should be marked off now for lifting, but it is better to allow the crowns to remain in the ground as long as possible before they are taken up, to ensure a season of rest, when they will force all the more readily. Not less than three-year-old crowns should be lifted, or the produce will be light. In many large gardens it is Christmas before forced Asparagus is put on the table, though it can be obtained much earlier if necessary. The great thing to guard against, however, is not to unduly hasten it by affording a high temperature either by top or bottom heat. The more slowly it is grown the stronger will be the grass; therefore those who are anxious to produce a few early dishes, say by the beginning of December, should place the crowns in the forcing pit quite a month or five weeks before that time. A good bed of leaves which will give a bottom-heat of from 65° to 70° will be sufficient to start growth, while the top-heat need not ex-

ceed 60°. It is when this is allowed to exceed 70° during the short, sunless days that the grass comes weak and is unfit for use. It is better even to allow the night temperature to fall 55° than to raise it much above 60°. If the pits are not furnished with hot-water pip covering must be employed at night, while may be necessary, as the season advances and the nights become colder, to afford a good thickness of lining round the pit of long stable litter. Blanched Asparagus, which is easily obtained by obscuring light, finds favour in some establishments. Before placing the roots in the frame, that the leaves below are affording a steady warmth. These should be made quite firm by treading, adding more if necessary, so that will be ready to receive the crowns they will not be more than a foot from the glass. A few inches of loam soil or spent Mushroom manure should be placed over the leaves on which to arrange the roots. In lifting these, trim the longest roots off, and place the crowns quite close together, afterwards covering them with fine soil or sand. The steam arising from the leaves will afford plenty of moisture, and watering by any other means will be unnecessary. If a succession has to be maintained, other frames must be prepared in the same way, in readiness to receive another batch in the course of a fortnight or three weeks.

**SEAKALE.**—This probably is the most common of all forced vegetables, but its quality and pearance greatly depend on the treatment afforded, and it is appreciated accordingly. Until it is tender and well blanched it finds little favour and when not sent to table in a fresh condition becomes bitter and almost offensive. The earliest batch of plants which has occupied a sunny position during the summer will be found much further advanced as regards shedding the foliage than that grown on cool, moist borders. An outside supply of Beans is cut off by frost, and Seakale is about the first thing we turn to to assist in affording variety, but it is a mistake to lift the roots directly the leaves part from the crown. These with weeds, &c., should be removed so that the plants are fully exposed to a few frosts, which cause an enforced rest, which, though it may be for less than a fortnight's duration, is sufficient to make growth start more quickly when subjected to artificial heat. There are various methods employed for forcing this vegetable which vary according to the quantity required and the convenience at disposal. Small quantities, such as a few dozen crowns, may be packed rather closely in a deep box, such as bulbs generally arrive in, standing this beneath the stage of a warm greenhouse. Every particle of light must be carefully obscured, and if the outside of the box can be packed round with damp leaves of Moss so much the better, as this maintains an even temperature and prevents the escape of moisture. Some cover the crowns with 6 inches or more of sifted leaf-mould. Growth pushed through this and the shoots come beautiful white and crisp, and may be cut as soon as they push through the surface. Larger quantities should have a corner in the Mushroom house devoted to them, as in this position it can be easily examined and cut as required. Growth is rather too slow at this season, but good results to come from crowns placed in an ordinary cellar without some artificial warmth, though such a position is most suitable later when growth is more easily excited. It is very important that sufficient crowns be put in at regular intervals to meet the requirements, as the quality is quickly impaired if kept for several days after it is cut before being used. Seakale always of better quality when brought gradually under a good body of leaves, hence there is much to recommend the old-fashioned plan of covering the crowns with pots or boxes, but as this plan is hardly suitable for the early supplies, lifting the roots is the only alternative until the turn of the year, when the permanent stools may be covered as described above.

**GENERAL WORK.**—The autumn so far has been most genial, and the growth of winter crops is

ceived no check. The condition of the soil, has caused the seed of weeds to germinate freely, and if advantage is only taken to get these cleared down during dry weather, it would tend greatly towards securing a clean garden next spring. Exhausted crops, especially Peas and runner Beans, should be cleared off the ground as soon as the treading caused by their removal will do heavy soil a lot of harm later on when saturated with moisture. Continue to sprinkle with lime or wood-ashes between the rows of winter Spinach if slugs prove troublesome. Edishes, too, which have been sown at the foot of a south wall, should also be dusted over, and the clean, dry straw should be shaken over them at the approach of frost. In warm localities sowing of Black Spanish and China Rose Edishes may be made in a sheltered corner, and if they have the protection of a temporary frame, useful gatherings may be obtained most of the winter. Dig up and remove to a cool shed or dark Autumn Giant Cauliflowers when they have attained a serviceable size, as they would last in a better condition under cover than when exposed to frost. Also remove the stems of decayed leaves of those that have been cut over, as they not only look untidy, but also give an unpleasant odour when decaying.

RICHARD PARKER.

### FRUIT HOUSES.

**EARLY VINERY.**—The time for starting will of course vary according to the time ripe Grapes are required in the ensuing year, but should they be wanted in April next, the Vines should be started no later than November. This will allow none too much time if the forcing is conducted, as it should be, in a gradual manner, and it is always best to err on the safe side and to allow a margin in the shape of an extra week or two than to have hurried the Vines, particularly at the outset, when they are naturally slow in starting into growth. If the necessary heat is to be obtained from a fermenting bed of leaves and manure for the first few weeks, the materials should be collected and thrown together to ferment. After being turned once or twice to liberate rank steam and gases, it may be taken in and made up into a long ridge-shaped bed in the body of the house. The border occupies the body of the house, except a temporary stage of boards laid upon blocks to keep the materials off the soil, as they would do more harm than good if placed directly upon the latter. This heap should be added to as often as required, for which a heap should always be held in reserve outside. When replenishment is needed, take the opportunity for turning the whole mass, and if much vapour is given off, slightly open the top ventilators to allow it to pass away. The genial heat given off by the fermenting bed answers all requirements for the first few weeks, and is to be preferred to fire-heat, while it economises the latter. However, it is only those living in country districts who can avail themselves of this method, and those less fortunately situated must perforce make use of artificial heat from start to finish. At starting, the daily routine will be to syringe the rods once or twice a day with tepid water, according to the weather, but always have the wood dry by nightfall. The temperature should be 55° by day, with a rise of 10° more with sun-heat, and when air has been admitted, shut it off not later than 1 p.m. Keep the vapour troughs filled with water and do not let the night temperature exceed 50°. Until the Vines break regularly the rods should be bent round, or otherwise lowered from the trellis, so that the points or extremities should be below the level of the wall plate, which will ensure a more regular break by equalising the flow of sap.

**POT VINES.**—These are used in many places in the garden, and when skilfully cultivated give most excellent results. Should ripe fruit be wanted from them by April, they had best be sown early in November, and prepare the house for their reception forthwith. This should, if

possible, occupy a south or south-eastern position, and the roof should have a fairly steep pitch in order that every ray of sun may be utilised. With regard to the interior, a good bed should exist or be constructed to hold a bed of leaves if the plunging system is favoured, not but that equally as good results can be obtained if the pots are merely stood on a stage erected over the hot-water pipes running round the sides or front of the house. Plunging is the most economical if plenty of tree leaves can be obtained, as this both economises fire-heat and means less labour in the shape of watering when the pots are surrounded with the moist materials forming the bed. When the pots are to be plunged they must be stood on a good firm base, and for this purpose use either inverted flower-pots or build piers of loose bricks to the required height. Enlarge the crock holes before placing the plants in position, and a mound of rich compost, largely consisting of fibrous loam, may be built up round these piers and level with the base of the pots for the roots to work in. The bed may then be filled with Beech or Oak leaves, which have lain in a heap outside sufficiently long enough to have fermented, but do not compact them too much at the outset or until it has been found, by means of the dipping thermometer, the amount of heat that is being given off. The bottom-heat must not exceed 75°, and if the mercury indicates a higher figure than this, the leaves must be loosened and partially pulled away from round the pots until it is found that the heat is subsiding, when they may be replaced. The canes should be bent down to ensure their breaking properly, and in all other matters of detail as regards temperature, &c., observe the directions given above for permanent Vine-foreing. With regard to watering, the soil, after being moistened at the start, should be kept neither wet nor dry until the roots become active. When the Vines break freely, more water will be required, which, it is hardly necessary to state, must always be applied in a tepid state. If the pots are to be stood on side stages it is a good plan to stand each pot in another two or three sizes larger, wherein may be placed compost for the roots to feed in after a time. If this is objected to on the score of expense in purchasing pots for the purpose, should there be none available, compost may be placed under and round the pots, only the precaution should be taken to leave a clear space immediately under the crock hole at the bottom for water to pass away quickly. The roots, in search of food and moisture, will quickly find this compost, and it will prove of the utmost service in enabling the Vines to perfect the crop.

**POT FIGS.**—If ripe fruits are likely to be in demand at the same time as the Grapes, a house of bush trees should be started early next month. The trees as well as the house should be in a perfectly clean state, and the former should have been undergoing a thorough rest for some time past. Much, if not all, that has been said about the preparations for the forcing of pot Vines applies to pot Figs, and whichever method is approved of, steps for carrying out the same should be adopted. Top-dressing may be applied now, or it may stand over until the trees start growing, but in any case the balls of soil should be thoroughly soaked with tepid water as soon as the house is closed for starting. The temperatures given above for Vines will suit Figs admirably at the starting.

**EARLY PEACH HOUSE.**—Very often ripe Peaches and Nectarines are required in the months of April and May in addition to the other fruits named, and when this is the case it is imperative that the trees should be started not later than the middle of November. This will just give them sufficient time without having to resort to hard forcing, of which the subjects under consideration are very impatient. The necessary pruning, cleaning, and training of the trees should therefore be taken in hand at once, not neglecting to give the structure a thorough cleansing at the same time, and top-dress borders if this matter has not already had attention.

**POT STRAWBERRIES.**—Those intended for early forcing should be moved into cold pits and frames, where they should have free exposure, wet weather excepted, when the lights should be put on and tilted. Keep the soil in a medium state of moisture, neither too wet nor too dry, so that the crowns may experience a season of rest before being started. Successional batches of plants may be moved under cover as opportunity offers, placing them in orchard or Peach houses if pits and frames are not available. Plants for late forcing may be kept outdoors a short time longer. Keep all runners suppressed, and if more crowns than one have developed, reduce them to one, leaving, as a matter of course, that which is the strongest. Where plunging or staking of these late pot plants is practised, the same should be done about the middle of November or a little earlier, according to locality.

A. W.

## KITCHEN GARDEN.

### MARKET CUCUMBERS.

IN the course of the very comprehensive and admirable paper on "Progress in Vegetables and their Culture during the Queen's Reign," read by Mr. Arthur H. Sutton at the recent Crystal Palace fruit show, he said with respect to Cucumbers:—

Notwithstanding the almost endless varieties now procurable, it is generally admitted that none of them supply the ideal type required for cultivation on a large scale. For productiveness no sort equals the best strain of Telegraph, but the somewhat pale colour, especially when the plants are bearing a heavy crop, lessens its value for market. If the council of the Royal Horticultural Society should see their way to undertake a series of trials at Chiswick I would gladly offer a prize of £5 5s. for the seedling Cucumber, raised since 1896, which shall combine the productiveness and excellent form of Telegraph with the dark colour of Rochford's Cucumber.

Doubtless many persons will read these remarks, coming from the source they do, with surprise, for during the past ten years there have been put into commerce numerous varieties of Cucumbers generally regarded as of high merit; yet it seems as if not one were so good a cropper as the old and excellent Telegraph. But, as is remarked, that variety is not usually of good colour, dark and pale or yellowish green fruits alternating, and the outline is somewhat fluted. Probably one of the best coloured of modern Cucumbers is Lockie's Perfection, and it is remarkably smooth and handsome, yet it seems not to have as a market variety in any way displaced Telegraph. Rochford's Cucumber, a dark green form, is somewhat spiny, and here is presented an element in Cucumbers that would, in awarding such a prize as Mr. Sutton offers, have to be taken into consideration, because market growers generally agree that a spiny fruit, if of good length and colour and handsome, is more in demand than is a smooth one. Of course, such a point would have to be determined. Any trial of Cucumbers conducted at Chiswick would, to be efficient, have to be on a comprehensive scale. Possibly fifty diverse varieties might be sent in, and it would be useless to trust to any trial that comprised one plant only. Certainly not less than three should be grown, and the best results would be found in a long, low, broad span house, the soil being in wooden troughs about 16 inches wide and 6 inches to 8 inches deep. This is a far better method of growing the plants than in pots or on mounds of soil. Of course a large house would be needed, and there is none such at Chiswick. The money spent in build-

ing the useless entrance glasshouse might have been turned to far better account in erecting houses for the trial of such as Cucumbers, Melons, &c. GROWER.

**Drumhead Cabbage.**—Drumhead Cabbage is a capital variety for present cutting where there is a large demand. An impression prevails that it is strong and coarse, and certainly firm solid heads some 15 inches or 16 inches in diameter would tend to convey that idea; but, as a matter of fact, it is as mild as the best type of Savoy.—E. B. C.

**Vegetable Marrow as a climber.**—I have been in the habit of growing this delicious vegetable for many years in the usual way by planting it in a sunny spot, and allowing it to grow along the ground, but have invariably lost many fruits by damp and moulding off. This year I got a hint that such would be entirely avoided by planting it under a bare tree or any old trunk, and training the marrow up the stem—which hint I followed with entire success, not losing a single fruit; besides, the effect was most picturesque, the foliage of the marrow being most vigorous and of a beautiful deep green. I can thoroughly recommend this plan; besides, it saves much ground space.—A. G., in *Field*.

**Early Brussels Sprouts.**—I do not think that any vegetable crop repays extra care in the matter of getting the plants started early in the season, so as to give them a long season of growth, better than Brussels Sprouts. For several seasons past I have made it a rule to sow seed in a cold frame in February. The seedlings will be fit for pricking out on a sheltered border in April, and by the middle of May will be fine sturdy plants ready to go out in the open ground, and, once established, it must be a very exceptional season if they do not grow away vigorously, and make not only large stems but good hard ones, crowned with a head of foliage enough to ward off a sharp frost. When severe winters cut up the outdoor vegetable crop, it will be found that the early-sown and early-planted Brussels Sprouts put out on soil that has had no fresh manure applied will survive the ordeal far better than later planted crops put out on richer soil.—J. G., Gosport.

**Lettuces failing.**—A correspondent asks for a remedy against mould attacking Lettuce plants. I have frequently met with the same thing, the evil being more common with the Bath or Brown Cos than other sorts. Moreover, it is more often met with in gardens where Lettuce and other small green vegetables and salads have been raised for many years, the ground having become as it were Lettuce-sick. This fact points to the necessity of occasionally changing the ground for such things. This is sometimes difficult in gardens of small size, and in such cases the best way to prevent such attacks is to incorporate with the staple soil of the border a good dressing of gas-lime and wood ashes, and if a little fresh loamy compost can be procured as well, so much the better, mixing them all previous to digging the ground, this being best done in winter. Sometimes the fault lies in sowing old or poor seed improperly ripened, the evil being further encouraged by allowing the young plants to remain in the seed-beds too long in a crowded state.—C. C. H.

**Celery growing for market.**—Celery, it would appear, is, like other things, affected in various ways by different soils and localities, some varieties succeeding so much better in one district than another. Almost every Celery grower has his own favourite variety. At Gainsborough, in Lincolnshire, for instance, where scores of acres of Celery are grown for market, Clayworth Prize Pink is the favourite strain, and right well it grows too; while at Retford, some twenty miles distant, and where also very large acres are planted with Celery, Grove White and Grove Red are the favourite sorts. In market gardens in Norfolk and East Anglia generally, much is thought of that good old variety Ivery's Non-such. This in good ground grows taller than the

majority of Celeries, but it comes very firm and eats crisp. In many districts preference is given to Leicester Red, and my experience is, after having tried many varieties, that, while being all that can be wished for from a quality point of view, it has no equal for standing a wet winter.—J. CRAWFORD.

## ROSE GARDEN.

### ROSE MME. GABRIEL LUIZET.

THIS splendid Rose was introduced as far back as 1877, and since that time many excellent Hybrid Perpetuals have appeared, but yet for exhibitors it still retains the proud position of being the second best pink Rose in this class, the premier place being generally accorded to Mrs. John Laing. The colour of Mme. G. Luizet is a clear and delicate silvery pink with white edged petals, globular in form, and pointed centre. It is also sweet-scented, a quality that enables this Rose to take precedence over the lovely Baroness Rothschild, whilst its extra vigorous growth is all that one could desire. Perhaps some growers may com-



Rose Mme. Gabriel Luizet.

plain that they cannot obtain any autumnal flowers. Although I grant that it is anything but a free autumnal flowering Rose, it may, nevertheless, by careful pruning be induced to yield a fair supply. But with the wealth of Hybrid Teas and Teas that we now have we are far less dependent at the present day upon the so-called Perpetuals for our autumnal display than we were hitherto, and we may well rest content if such a Rose as Mme. Gabriel Luizet provide us with a glorious feast of blossom in June and July. PHILOMEL.

**Rose Ella Gordon.**—To say that this Rose is vigorous conveys but a slight idea of its luxuriant growth. It is not at all an uncommon occurrence for it to produce shoots 5 feet to 6 feet long in a season. This fact should be remembered by all who desire Roses of this nature, for their uses are manifold, be it to form hedges, training on pillars, or growing as single specimens on lawns. I know of no better crimson Hybrid Perpetual Rose for autumnal blooming than this. The globular-shaped flowers are large, but not coarse. They generally come good and have beautifully smooth petals of a brilliant cherry-crimson colour. I should take it to be a seedling from Mme. Victor Verdier.

We find just the same peculiar purplish wood the end of the shoots, but it is far more vigorous even than this grand Rose. I can commend also for pot culture. Under cool treatment it is formidable rival to Ulrich Brunner.—P.

**Rose Cecile Brunner.**—The popularity of this pretty Rose is increasing. The flowers are exceedingly tiny, and yet so perfect in form as to give one the impression that they are moulded in porcelain. The comely little buds, of a warm carmine and flesh tint, would be found very use by florists. It is one of the most vigorous varieties of the dwarf section of these beautiful Po-antha Roses, and an excellent kind to plant where a low hedge is wanted. Although not decorative as Gloire des Polyantha on account of its more branching habit, it is, nevertheless, highly attractive when grown in a mass.

**Fortune's Yellow Rose.**—No one seems to grow this superb climber more successfully than does Mr. Fyfe at Lockinge Park. It is there several houses, so as to have early and late bloom. No sooner are the flowers over in the spring than the flowering shoots are hard cut back to the main stems, and new growths breaking from the base are carried up. These run in the season great length, and being shortened back in winter to the hard wood, carry clusters of flowers from every leaf-bud. They are of a rich apricot-yellow and of exquisite beauty. A variety should make a capital market Rose.—A. D.

**Rose Perle de Feu** is remarkably coloured variety of the Tea-scented section. It may perhaps be best described as reddish or heavily shaded with gold-russet. It really is more fine in hue than Beauté Instantane. But having said much in its favour, I must point out that the flowers are very poor in size. The colour I can see for it is a basis for hybridists to work upon. I feel sure some excellent results would follow if this Rose were used as a pollen parent in hybridising some of our free-seeding Teas with orange shadings, such as Beauté Instantane, Grill, Mme. Chauvry, and venir de Mme. Sablayrol &c. One peculiar feature of some of these very rich dish-orange Roses is the lilac shading seen on some of the petals. Perle de Feu is a very good grower, the wood and foliage being of a rich russet-brown.—P.

**Rose Irene Watts.**—This Rose must speedily become popular, and perhaps in time entirely eclipse its parent, Mme. Laurette Messimy. The flowers are quite different in form from those of Laurette Messimy. As is well known, Mme. Messimy has very loose, informal blossoms, whereas those of Irene Watts are quite compact and certainly more double. It is difficult to distinguish the difference between some of the so-called Chinas and Tea-scented. I do not know that it matters much so long as we obtain fine-flowering Roses. Irene Watts has almost the requisite formation of a medium-sized Catherine Mermet, but of course not nearly so full. The colour is a clear China rose, merging to silvery-pink, the base of petals canary-yellow. Its beautiful bronze foliage serves to accentuate the fresh colour of the flowers. It will make a good contrast to Mme. Eugène Resal.—E.

**Mildew on Roses.**—The advice given in Dole's book, and quoted by "An Amateur" on p. 216, is quite sound, for soot is one of the best preventives of mildew there is. But it is not to be used in a fresh state, or the result will

An Amateur" describes. For years I have it for Chrysanthemums, and never had a leaf until two years ago, when I used some from the flue of ainery that had been pulled. The flue had not been used for several years. I thought I was safe in using the soot, but a few days after that all the tips of the plants were burnt. This led to an examination of the flue, and I found that the smoke from a boiler had been fixed in the place of the old flue for heating other houses had been leaking through into it. If "An Amateur" will save his for a couple of seasons and then use it, he will find he has a most valuable fertiliser and a natural fungicide as well. If well diluted and clear it is excellent for syringing Chrysanthemums, Pelargoniums, and other plants on morn'g evenings, while dusted over the foliage of many plants while this is damp it forms an excellent stimulant, and makes the leaves distasteful to insects of all kinds.—R.

**Sowing Brier and Rose seed.**—All heaps of Briers and Roses should be gathered as soon as possible now, or the birds will pick out the best and plumpest seeds. Store the heaps in sand for a week, taking care they are safe from mice. Break up the heaps and thoroughly mix sand and earth early in February. Then sow very thinly in shallow drills upon a warm border and protect with straw, birds and mice. The advantage of drills over broadcast sowing is in being able to use the soil between. Rose heaps may be sown in pans or boxes or in a cold frame, and where one has a choice heaps only, this may be the safest plan. Pick out the spring following, giving the seedlings good loam, and placing them a foot apart each way. Do not be too hasty in discarding any that do not flower or which seem inferior, as the first trials are not a fair test.—R.

#### AUTUMNAL ROSES.

The rich feast of Roses that has delighted the lovers to the recent Drill Hall and Crystal Palace exhibitions must have been a matter for regret to many who had the pleasure of inspecting them. Although for many autumns we have had the Bourbons, Chinas and Teas to beautify our gardens at this period of the year, only during the last eight or ten years that such varieties recently shown have been put into commerce, and a comparison of the plants now to be had with those available ten or twenty years ago must call forth our gratitude to those who have been instrumental in providing us with these delightful novelties. Because these varieties are so good in autumn, it must not be inferred that they are only good in this season; on the contrary, many of them were the first to expand their blossoms in the month of June, and they continue to open more or less the whole of the summer. Possibly the rather unusual display of Roses that has brightened our gardens this autumn is attributable to the drought we experienced in the summer months, which, as it were, stopped vegetation for a time, and then the copious autumnal rains that we had started the plants into new growth, resulting in the glorious display that we have lately witnessed. But, granted that this is so, we are, nevertheless, mainly indebted for this display to the recent introductions. I think it is a matter well worth considering whether some means could not be taken in a wet summer to ensure a gorgeous autumnal feast such as we have had this year. The main point to consider would be to take some measures after the first flowering to give the plants a rest by keeping the rain off, and this could be secured, I think, by placing over the beds of Teas and Hybrid Teas temporary covers with glass coverings. If this were done for three or four weeks to give the plants

a thorough rest, we should, as it were, produce the same conditions that the Rose growers of the Riviera obtain naturally, and thus secure a good autumnal and even early winter display in this fickle climate of ours. At any rate, it would be worth a trial, especially by market growers and gardeners who have large demands for autumnal Roses. P.

**Rose Queen Mab.**—This is a charming dwarf Rose, being one of a section to which a good deal of attention is now being paid. It is a China or Bengal, and the colour is apricot, shaded with orange and rose. Frequenters of the Drill Hall must have noticed it, as it has been admirably exhibited as a pot Rose, and it struck everybody who has seen it by its distinctness and free-flowering character. We have already had *Laurette Messimy* and *Duke of York*, both of which are highly thought of. There has appeared, too, a climbing variety of that very beautiful old China, *Cramoisi Supérieur*, which for brilliancy of colour is hardly surpassed by any Rose in this or any other section. It has been a grand season for autumn blooming. Hybrid Perpetuals, Hybrid Teas, and more especially pure Teas have given us many beautiful flowers, and, should the present weather continue, will do so for some weeks to come.—D.

**Hybrid Sweet Briers.**—My plants, each 10 feet to 12 feet high, exceedingly bushy and strong, had been fastened to stout stakes; but the growth was so heavy, that the recent gale snapped the stakes and completely mixed up the wood. I may say they are planted in the form of a semi-circle, intended to be brought over at top and thus make a pleasant arbour. All who have handled these Sweet Briers are aware of the immense strength and fierceness of their prickles, and will sympathise with me in the task of disentangling such a mass as these formed. It was simply impossible under ordinary conditions, so I procured several hop-poles, sawed some off to a length of 12 feet and drove them into the ground upon the outside of the arbour, fixing two rows of the poles lengthwise from these uprights. A second upright was fastened as far inside as possible, and another pole used to lever the growth up to the cross pieces first fixed. As I got the growths up they were fastened with rope yarn and the cross pole secured to the uprights on the outside with some strong wire taken from bales of peat moss litter. By following this plan right round the arbour I eventually got them into place, and so firmly secured that no gale will move them again. To have cut away some of the growth would have been a great sacrifice of bloom; besides, I could not have drawn out the severed wood without entangling the remainder even more than it was. As a hedge I do not think any plant can be more effectual in keeping out trespassers than the Sweet Briers. They are simply impregnable after the first year's growth. Nor could we have a more pleasing hedge. They root remarkably well as ripened cuttings and make capital stocks for strong-growing Teas or Hybrid Perpetuals. My own are now perfectly scarlet with hedges, and if these are gathered and sown, a large number may be raised for next autumn's planting. How very easy it would be to beautify our hedgerows and borders of woods with seedlings of these.—R.

#### SHORT NOTES—ROSES.

**Rose Rev. Alan Cheales.**—By those who are fond of large Roses, this new variety of Messrs. Paul and Son, of Cheshunt, will be much valued. It is somewhat of the Ulrich Brunner type of flower. The colour is very peculiar, being almost a pure lake. It is vigorous and free-flowering.

**Rose Bladud.**—This I believe to have been one of the late Mr. Bennet's seedlings, which passed into the hands of Messrs. Cooling and Sons, Bath. It is a very large Rose, full, outside petals silvery-white, with

pale blush centre. It promises to be a good garden Rose, but will also be found in many an exhibition stand.—D.

**Rose Paul's Single Scarlet.**—This promises to be a valuable addition to our single Roses. The colour is very brilliant, almost pure scarlet. As it is stated to be a H.P., we may fully expect that it will follow the example of Paul's Single White and give us a crop of its brilliant flowers in autumn as well as in summer; it is very vigorous in habit.

**Rose Cannes la Coquette.**—This is one of Nabonand's raising, and, although twenty years old, is not nearly so much appreciated as I think it ought to be. It is very vigorous, and the flowers are of a pleasing shade of very delicate fawn, marked with flesh, especially towards the edges of the petals, sometimes making it appear like *Homère*, and borne well into the autumn.—H. H. D.

**Rose Paul's Single White.**—Most of the single Roses are only summer bloomers, but as far as my experience of this Rose goes it has the advantage of giving a double crop of flowers. For the last two years I have had my plant of it quite as full in September as it was in June. The variety is well known and is very similar to *macrantha*; the stamens, however, do not retain their brilliant yellow colour so long as in that flower.—D.

**Rose Mme. Pierre Cochet.**—This is one of those charming Roses whose colour is most difficult to describe, in which, however, orange-yellow most predominates. The buds are long and pointed; in fact, it is in this state alone that it is valuable, for when it expands, the flower is loose and its brilliancy has departed. It is a profuse and continuous bloomer, and flowers may always be relied upon in the autumn months. It was raised by Cochet in 1892.

**Rose Mrs. Sharman Crawford.**—This beautiful pink Rose, which was sent out by Messrs. Dickson and Sons, Newtownards, in 1891, has now become established as a general favourite owing to its beautiful colour, good habit, and freedom of flowering, and to these recommendations must be added, I think, that it is one of the freest of autumnal bloomers, as the few plants that I have of it have afforded a plentiful supply of good flowers this autumn.—D.

**Rose Safrano a fleur rouge.**—As with many of the semi-double Roses, this variety is most lovely in autumn. It has fine deep petals, reflexed at the edges, the outer ones of a clear rosy red colour, and the centre a beautiful blending of salmon, orange and pink. I have generally found the petals to be a little firmer in texture than those of the old Safrano, but with this exception and in the colour it is identical with this popular variety. Just now it is one of the showiest in the collection.

**Rose Medea.**—This beautiful Rose, which was sent out by Wm Paul and Son in 1891, has been the subject of a good deal of controversy, owing to someone having compared it to *Maréchal Niel* and given it the preference—clearly a mistake. In the first place, *Medea* is a Tea and *Maréchal Niel* a *Noisette*, while in growth and habit they are both distinct. In colour, too, *Maréchal Niel* has not been approached by any other Rose. *Medea* is a very beautiful Rose, of a lemon shade of yellow, of good form and substance, while the growth is vigorous.

**Rose Sunset.**—It is surprising that many Rose sports do better outdoors than the varieties from which they emanated. This Rose has been grand with me this autumn, but I cannot say the same of *Perle des Jardins*. The flowers of this appear to open rather hard, but this is not so with *Sunset*. The colour of the blossoms is rich tawny saffron or apricot. This variety is far superior to *Mme. Falcot* in substance, but, of course, it will not surpass this old variety as a button-hole flower. *Sunset* is a superb variety under glass, and I can highly commend it.—PHILOMEL.

**Rose Muriel Grahame.**—There is a general consensus of opinion that this is a most valuable addition to our Tea Roses. It is a sport, not from *The Bride*, but from *Catherine Mermet*, and was obtained by Mr. Browne, of Reigate, gardener to Mrs. Waterlow, at Great Doods. It passed from him into the hands of Messrs. Alex. Dickson and Sons, of Newtownards, by whom it has been distributed. No greater testimony to its value can be given than the fact that it has obtained the silver medal of the National Rose Society for the best Tea in the amateurs' division both at the metropolitan show at the Crystal Palace and also at the northern provincial show at Norwich.

## ORCHIDS.

## ONCIDIUM JONESIANUM.

THIS is a very distinct and beautiful *Oncidium*. The pseudo-bulbs are so small as to be hardly noticed, and at a first glance one would say the plant consisted only of the leaves and roots. The foliage is often 1 foot and upwards in length, and its natural habit appears to be to grow with the points downward. The growths are very closely clustered together, and the spike appears at the base of those last formed. These grow erect at first, their weight gradually bringing them to an arching position, that shows off the blossoms very prettily. Individually these are about 2 inches across, and on strong spikes nearly a score of these are produced, making a fine and showy inflorescence. The

noticed on several occasions beginners in *Orchid* growing find a difficulty in firming plants of this description. If there are no roots or but very few, it is safest to wire the plants to small blocks of wood, placing these in the pans and wedging a few bits of crocks around them to hold them firm. Then as little compost as may be needed can be easily pointed in over them with the dibber. Rafts, as hinted above, are suitable, and on these the plants may easily be fixed with a little Moss under the roots in the usual manner. I am not much in favour of dressed blocks of any kind, but in wiring plants of this class on to small pieces of wood a little Moss may be placed underneath with advantage. The compost and receptacle for these strictly epiphytal kinds are in fact more in the nature of a mechanical support than a manurial one, for they derive nearly all the susten-

them well by exposure to sunlight when full grown. Then it is possible to keep them rest for a time without drying the roots sufficiently to cause the least shrivelling. Plants that have been for a season or two inured to this treatment are always more free blooming than those that make, perhaps, two distinct sets of growth in one season. Propagation is best effected in early spring by cutting with a sharp knife between the bulbs, allowing several leads, if possible, to each divided portion and setting each going on its account. R.

**Cattleya throwing up a flower-spike**  
I have a piece of *Cattleya* which I do not know the name of. It made three growths this summer, two with sheaths and one without sheath. The growth without a sheath is throwing up a flower-spike. not this very unusual W. D.

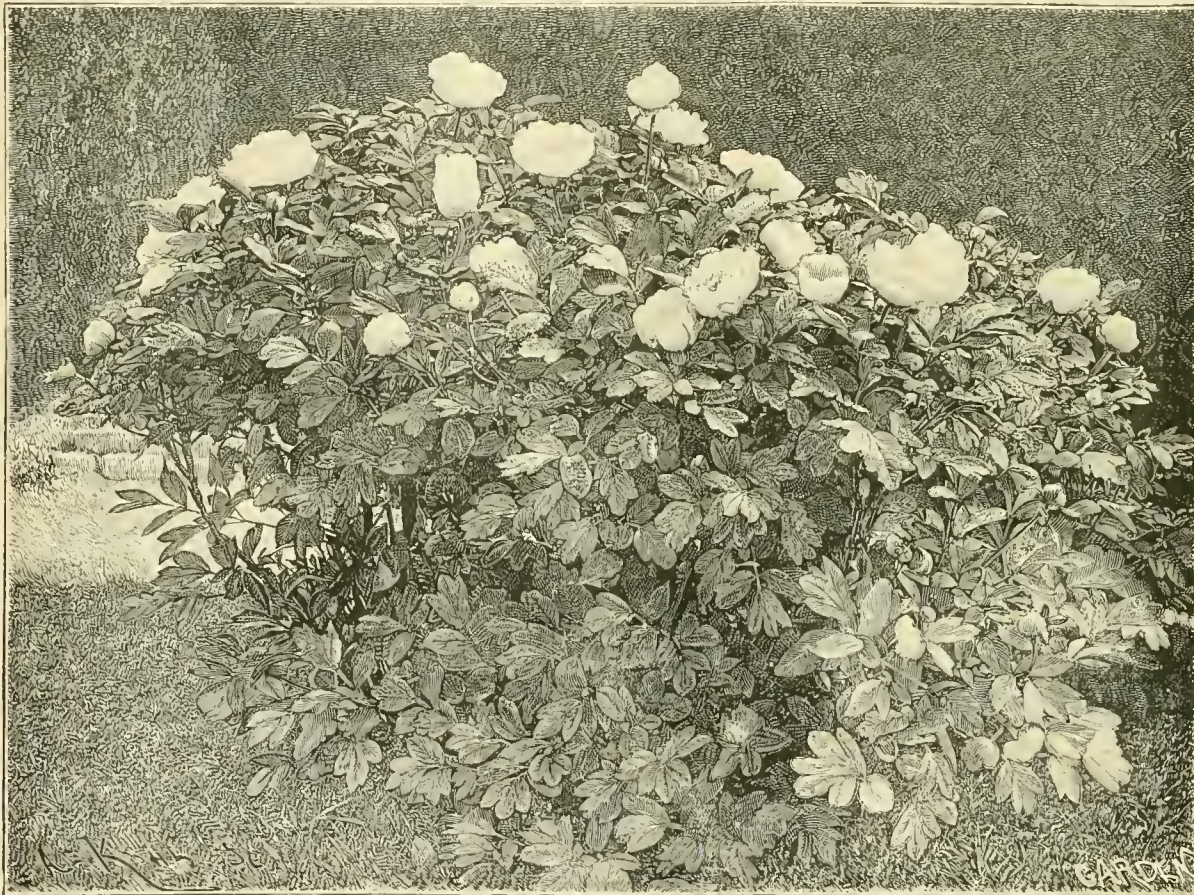
\* \* \* This is not a very common occurrence, it happens occasionally with *Cattleyas*, and *Epidendrums* with *Cattleya*-like habit. Ed.

**Calanthe vera folia.**—The pure white blossoms of this elegant Orchid are always welcome, and large healthy specimens have a fine appearance just now. The flowers last long, provided they are kept dry, but the least amount of water spots and blights figures them. The culture of this plant consists simply in potting in a good substantial compost in well-drained pots, giving abundance of water while growth is active and a little liquid manure occasionally.

**Angræcum fastidiosum.**—This is not, I think, the usual flowering season of this pretty plant, but I noted it in bloom a day or two since. The flowers are pure white with a little curving spur. The plant is dwarf, the leaves about 3 inches long, deep shining green, the spike curving near the upper part of the plant. It is a native of Madagascar and thrives well in suspended baskets or

pans well drained, and in a thin compost of Moss and charcoal. Plenty of heat and a brisk, moist atmosphere are required, the roots liking plenty of moisture as long as it drains away freely. It was introduced by Messrs. Sander and Co. in 1831.—H.

**Cattleya aurea.**—Among several plants of this lovely *Cattleya* now in flower there is a considerable variety, one having a very deeply tinted lip of that beautiful velvety appearance so much admired by everyone who sees it, especially in the first time. The outer segments are of a cranke-yellow, nicely undulated and broader than usual. *Cattleyas* of all kinds appear to be done remarkably well this season, and I never saw the autumn blooming kinds so free and full of promise. *C. aurea* is not a whit behind the rest, and owing to its attractiveness and the silky character of the blossoms, seems to lead the way



A single-flowered Tree Pwony. (See p. 325.)

sepals and petals are wavy on the edges, pale yellow, with deep reddish brown blotches in the type, though varieties exist with orange spots. The lip is large and showy, kidney-shaped, with a wavy edge, the crest being dotted with red. The flowers are very lasting, but unless the plants are strong and well established they must not be left on until they fade. Bare block treatment is often recommended for this species, and it does well grown thus if well attended to as regards moisture, but if I can get a plant to take hold of a little compost, if only on a raft, I usually treat it so. The roots of this species cannot, however, take hold of much material, especially if this is in the least degree close or apt to decay. Small pans nearly filled with crocks and a mere surfacing of *Sphagnum Moss* will grow it well, but I have

ance they need from a properly moistened atmosphere. The best position to grow *O. Jonesianum* in is an almost unshaded one in the warmest house at command, and, if convenient, the plants may with advantage be suspended over a water tank or in any part of the house where moisture is most abundant. On bright summer afternoons the syringe may be somewhat freely plied about the leaves, a gentle, fine spray being very helpful in keeping down insects. Growth is rapid when once the leaves emerge from the sheaths, and with the stimulating temperature caused by the sun and moisture, the little pseudo-bulbs soon swell up. With regard to its seasons of rest and growth, but little can be said, for the plant is very inconstant in this way. Endeavour in all cases where possible to bring the growths along rapidly, and ripen

along the labiate kinds. It delights in ample light and a full Cattleya temperature, and I find it better in baskets or pans suspended from the roof than in pots upon the stage. After the growths are fully developed and the flowers appear, the plants must be kept a little on the shade side at the roots, as they are apt to start in the summer. When they get over the first months of winter there is not so much danger, for if they do start the young shoots will by the time they need it get abundance of light. *C. Lippia* is a native of Colombia and was discovered by one of M. Linden's collectors, who first sent it home in 1868.—R.

**Laxillaria grandiflora.**—A plant or two of this beautiful old species should be in every collection if only for the sake of its delicious fragrance, which fills the house where it is flowering. The outer segments of the blooms are pure white and have a glistening, frosted appearance, the centre of the lip being yellow. Few Orchids are so troublesome to grow than *M. grandiflora*, provided the plants are kept clear of insects, and this is best done by growing them in a cool, shady and moist house all the year round, a minimum temperature of 50° suiting them well. Equal parts of peat, loam fibre and Sphagnum Moss suit it well, and it must be planted in medium-sized, well-lined pots. It is a native of Peru, and was introduced in 1850.

**Arkeria Lindleyana.**—The long many-flowered spikes produced by this species are among the most striking of any at this time of year. The plant grows erect, the stems being very slender and about a foot high, the spikes appearing at the apex of these just as growth is finishing for the season. The flowers vary a good deal both in colour and width of the segments, the usually recognised as the typical form being a very bright purple with a white centre to the lip. *B. Lindleyana* thrives best in a light and airy part of the Cattleya house during the summer and autumn, in fact until the growth is finished and the flowers past, and during the whole of the winter it must not be allowed to get dry. Owing to the peculiar nature of the roots these will not thrive in a large body of compost, and for this reason more frequent moistenings are necessary. A syringe, too, may with advantage be freely used about the growths. During the winter and early spring months the plants do with much less moisture and in a cooler house. Small shallow baskets or rafts kept flat suit the plants well, and the plants may be replanted after the growths have made considerable headway and are beginning to emit young roots from the base.

#### CYPRIPEDIUM SPICERIANUM.

This distinct and handsome *Cypridium* is now in flower, and popular as it has become, there is little fear of getting over-stocked with it. In fact it is not unlike *C. insigne*, but the foliage is usually shorter, of a deeper green and spotted on the under-side with dark purple. It commences to bloom the first week in October, and one often sees it as late as the end of January, so that its value in keeping up a display is obvious. In a good typical form the flowers are each about 4 inches across, the distinct white dorsal sepal hanging a line of deep blackish-purple running through it. The wavy sepals are light green, the petals shining brown. It is not a difficult plant to grow when the right position is found for it, a good deal depending upon the atmospheric condition of the house. I have seen it thriving well in an intermediate house and again some very successful growers give it quite tropical treatment during the growing season, but in any case a risk moist heat and a broken light rather than a very heavy shade suit it well. The compost for it may consist of good peat fibre, loam with most of the finer soil shaken out and clean Sphagnum Moss. If this compost is firmly placed about the roots *C. Spicerianum* will grow in it well. During the growing season healthy plants with their roots running freely

in the compost require plenty of water; indeed, the roots ought never to be dry. Badly-rooted specimens should be shaken clear of the old material if this is in bad condition, well washed, and repotted into small pots in a very light description of compost over good drainage. They soon recover if not too far gone, and make nice healthy little plants if carefully treated. Old plants with their roots much entwined about the pots require careful treatment when repotting becomes necessary. They are as easily tided over a bad check as most plants, but that is no reason for damaging them more than is necessary. The safest time to repot is the spring, as the plants may then be placed at once in a quick, moist temperature and soon get over the check to the roots. The flower-buds appear in late summer and autumn, when, if a large number of plants are grown, some should be taken to a cooler house to retard them and keep up a succession. The flowers last a long time in good condition if kept quite dry. R.

#### LAELIA PUMILA.

The pretty brightly-tinted blossoms of this species are very welcome just now, well flowered plants having a very fine appearance. The habit is dwarf, seldom exceeding 6 inches in height, and the blossoms are produced singly upon the scapes. Each one is about 4 inches across, the outer segments bright purplish-rose, the front of the lip having a fine broad purple blotch with a wavy margin. *L. pumila* cannot be described as a difficult plant to cultivate, yet many growers fail to do it well, and this as often as not is the result of using too much compost. To treat it the same in this respect as a vigorous rooting *Cattleya* or *Laelia* is to court disaster, for the plant has not the power to take hold of a large body of material. The roots issue from the growths and push out freely enough for an inch or so into the compost, but beyond this they cannot go, unless indeed it is an extra strong or vigorous one. The consequence is they decay at the tips and soon become of no further use to the plant. Had the same one been planted in a small and shallow pan, so that the roots could have reached the drainage or the sides, they would have been healthy and carried out their proper functions. Anyone having plants of this species, then, or *L. Dayana*, *L. prestans*, and other nearly related kinds in a close compost or one too thick for their needs, would do well to get them out of it and repot into the class of receptacle mentioned. About an inch of peat and Moss is ample for small and medium-sized plants, and even this will be better for the addition of a few crocks or pieces of charcoal. Air enters freely into a compost of this description, and in consequence it soon dries, needing water almost daily when the plants are growing freely. At this time they should be hung in a very light, sunny position not far from the roof-glass, and it will seldom be necessary to shade except for an hour or two in the middle of the day. A full *Cattleya* temperature may be maintained as long as growth is active, reducing this and the root moisture while at rest. The atmosphere should be kept fairly moist the whole year round, and the minimum temperature at night in the winter must not be less than 50°. *L. pumila* has long been known, but Messrs. Loddiges, of Hackney, appear to have been the first English firm to have imported it in quantity. This they did in 1843, and it has often been sent home by collectors since then. It is a native of Southern Brazil, where in the neighbourhood of Rio de Janeiro it is a fairly common Orchid, growing at various elevations on the sides of the mountains. It first flowered under cultivation in a French collection.

**Dendrobium chrysanthum.**—One of the finest Orchids I have seen for a long time was a grand old plant of this growing in a basket, this being placed in the pocket of a Fern-lined wall. The beautiful deep yellow of the blossoms with dense maroon eye showed up grandly against the

deep green of the Ferns, and as the flowers had opened more than usual the plant was all the more attractive. The longest bulbs were 4 feet 6 inches and clothed with blossoms from end to end. When well grown the foliage of this Orchid is fresh at the same time as the flowers.—H. R.

**Pleione humilis.**—I noted this pretty plant in bloom this week, though it has usually flowered with me in early spring. It is a variable kind, the typical form having nearly pure white sepals and petals, a slight tinge of rose sometimes appearing on them. The lip is pale rosy lilac, with orange-yellow and brown in a pretty combination; in fact, there are few more beautiful things in the whole Orchid family than the lip of *P. humilis*. Its culture does not differ materially from that of *P. lagenaria* and others, except that as it usually flowers later repotting takes place also later. It is a native of Nepal and was introduced in 1850.—R.

**Cattleya Gaskelliana.**—One of the prettiest forms I have seen of this species is now in flower with me. The plant is only a small one, the spike bearing three flowers of medium size. The sepals and petals are almost white when first open, a slight tinge of rose suffusing them when the blossoms are fully expanded. This paleness of the outer segments helps to show off the colour on the front of the lip, which is a deep crimson-purple, occurring in a narrow band down the centre. The side lobes are light crimson and prettily crisped, radiating lines of yellow taking the place of the usual orange tint seen in the throat.—H.

**The durability of Orchids.**—Of late there has been considerable discussion on this subject in the garden press. Very few instances are related where the examples mentioned are in as vigorous a condition as when they were originally introduced, and where an exception occurs it is worthy of notice. An instance of this may be seen at Gunnersbury House. In 1862 Mr. Hudson's father purchased a plant of *Laelia purpurata*, which has been in his son's charge ever since. Last season it bore thirty-five flowers. It has at the present time ten new growths, and fills an 18-inch pan. There are also two fine examples of *Vanda tricolor* that were procured on the same day. These are from 6 feet to 7 feet in height, and are clothed with foliage to the pots, truly remarkable instances of the longevity of plants. There are also several plants of *Cyrtopodium villosum* that were purchased at the same time. The whole three species do credit to Mr. Hudson's care.—H. J. CHAPMAN.

**Sophranitis violacea.**—Many people have found it difficult to get this species to succeed for many years together, but really it is not a difficult plant if reasonable care be bestowed upon it. Like all small-growing kinds, rapid changes in the atmosphere are very injurious to it. A dry or draughty house, let the temperature be as suitable as it may, will never do for it. Fresh air in abundance is good for it, and so is atmospheric moisture, but the elements require proper balancing, and the air should, if possible, be kept moving without opening the ventilators too wide. It likes a temperature rather higher than that of the *Odontoglossum* house, but the *Cattleya* house is too warm. The foliage is tender and easily damaged by direct sunlight. At the same time a very heavy, dense shade must be avoided, even in summer. It is the weakest grower in the genus, the pseudo-bulbs only about 1 inch in length, the narrow leaves being a little longer. The flowers are soft rosy magenta in colour. It grows most freely on soft pieces of Tree Fern stems, or, failing these, rafts lightly dressed with Sphagnum Moss or in very small pans. No resting season is needed, the roots being kept gently moving as long as possible and just moist when the growing season is over. It is a native of the Organ Mountains and was introduced in 1838.

**Dendrobium formosum giganteum.**—This is one of the finest of the white *Dendrobiums* and flowers during the present season. A recent visit to the gardens of Gunnersbury House revealed a

remarkable example of the successful cultivation of this lovely species. There were some fourteen plants in all. One was grown in a 12-inch basket. The longest bulb measured 22 inches and carried ten fully expanded flowers, each measuring  $4\frac{1}{2}$  inches across the petals by  $2\frac{1}{2}$  inches broad. There were some half-dozen other leading growths on the plant, with equally fine flowers, making altogether the total of thirty-five flowers. The flowers on this particular plant varied considerably from those of the other plants in the house, in that the yellow down the centre of the lip was of a deep bright orange, instead of the usual light lemon colour characteristic of this species. Another plant had a bulb 25 inches long and carried ten flowers. The plants were imported early last spring and placed in the baskets; they were then taken to the Fig house, where they were suspended close to the glass, and where they were fully exposed to the full power of the sun. Naturally under these conditions a highly humid state of the atmosphere had been maintained throughout their growing season, with plenty of moisture at the roots. They are certainly the finest examples of this Orchid it has been my lot to see.—HY. J. CHAPMAN.

## CHRYSANTHEMUMS.

### EARLY-FLOWERING CHRYSANTHEMUMS AT CHISWICK.

THE trial of early-flowering Chrysanthemums which is this year being conducted in the gardens of the Royal Horticultural Society at Chiswick will in all probability prove one of the most valuable of recent years. It is, indeed, not possible to fully estimate its worth, for even now, though the plants have been flowering for weeks in succession, the interest they are creating is quite remarkable. All the plants have been grown naturally, having no regard to the fact that some are pompons or hybrids of this set, and others—and these happily in a large majority—of the Japanese decorative class. Those having a special fondness for the late summer flowers will welcome the news that, even with the collapse of Dahlias and other tender subjects from the effects of the first frosts, there is still some hope of keeping the garden gay and beautiful for some weeks longer. For, after all, their greatest use and greatest value in the future must ever be as garden plants, and such of these as are perfectly hardy, vigorous, and free-flowering will not be wanting admirers. It is worthy of remark that Mme. Castex Desgrange and its several sports are not beaten to-day either for early flowering, freedom, or vigour. During the last two decades progress has been made, though somewhat slowly. During the last five years some good things have been brought to light, varieties, moreover, that will be valued for their effective colouring in the garden at this time. At page 312 of THE GARDEN the varieties considered worthy of the "three marks" are enumerated. This, however, is by no means an inclusive list of all that is good or useful for the embellishment of the garden generally, and, in fact, some striking things have in reality been passed over—so far, at least, as this trial is concerned.

Having made several visits to the collection at Chiswick, both before and after the recent severe frosts, it is possible the notes made on the spot may be of service to those having less opportunity for inspecting them, and while passing over without comment the ever-indispensable Mme. C. Desgrange, G. Wernig, and Mrs. Hawkins, I will briefly refer to what appeared the most worthy, at the time of my visit, from a garden or decorative stand-

point. The first visit of which I have note was in the last days of September, when the plants were extremely bright with the rich masses of colour, in many instances huge sheaves of blossom appearing in perfection and as the result of one short season's growth. In the white-flowered kinds, Lady Fitzvygram, 2 feet high and as much through, and Mrs. Cullingford, nearly  $2\frac{1}{2}$  feet, were excellent. Mytchett White is also a fine addition to the very early and dwarf sorts, though its rusty leaves do not improve its appearance. In yellow and orange shades, very fine masses of colour are Orange Child and Ivy Stark; both, however, are not wanted in one garden, so near do they approach each other in effect. The two kinds are about equal in height, i.e.,  $2\frac{1}{2}$  feet, and produce a mass of blossom at one time. The former I regard as the finer of these two excellent kinds. Bronze Prince, a salmony bronze, and Mme. Zephir Lionnet, a gold-bronze, are both grand and free at 3 feet high. Vice-President Hardy and Ambroise Thomas, shades of bronze, each distinct in itself, being excellent and of similar height. In shades of pink, Mme. Louis Lionnet, Mlle. Guindudeau, and Baronne de Briailles are very fine, Strathmeath, a lilac-pink, being very early, 20 inches high, and of the hybrid pompon class. Mme. Marie Masse, rose-mauve shade, is perhaps one of the most exquisite and charming in the whole of this lovely collection.

When the second visit was made, some days after the severe frost, I was surprised to find a large number little or none the worse, probably because of the dryness existing at the time, though the very earliest had passed their best, while on October 16 the following were in capital condition—indeed, making the only floral display in the open garden worthy the name. Of these, Orange Child and Mme. M. Masse, which have been in bloom for at least three weeks, were still good, and of course durability at such a time is a great point. Of others, Chevalier Ange de Bandeira, 2 feet, rose-magenta, was charming; Mme. F. de Cariel, a bronze-yellow,  $2\frac{1}{2}$  feet high, was at its best, flower of medium size and free; Ryceroft Glory, 3 feet high, was only just opening, but a mass of buds; Edith Owen, 3 feet high, has yellow flowers; Mme. Gajac, a rosy-lilac,  $2\frac{1}{2}$  feet high, was a fine mass of telling colour, and Mlle. Guindudeau was still in excellent condition. Crimson Queen and Ruby King appear identical, though only just opening; the colour is very fine, the plants less than 2 feet high, but it will need fine weather to the end of October to get even in southern gardens the beauty of this, the richest kind I saw. The free, compact habit is perfect.

These are the best to my mind from a free-flowering standpoint, and such as would, carefully disposed, make a lasting and beautiful display of warm, effective colouring in the garden as late as this is possible each year, with little or no staking or undue trouble. Many of the kinds noted here, if hardy enough to winter in the open garden—an all-important point—should flower earlier another year. This would bring some of the now later kinds into perfection in the first week in October. E. J.

**Chrysanthemum Klondyke**, referred to in last week's GARDEN, is destined to become a very popular market variety. Mr. Norman Davis, the raiser, says the habit and foliage are very similar to those of Elaine, well known to all growers as a first-class market sort. The flowers of the variety under notice are rich golden-yellow in colour with neat recurring florets, and build up a blossom of a useful size. For the decoration of large vases this variety would be valuable, especially

if autumn tinted foliage be used in association with the blooms. A good yellow of refined appearance is badly wanted during October.—C.

**Chrysanthemum Edith Tabor**.—The only fault of this lovely variety is its ungainly habit, this quite unfitting it for growing into a nice shaped plant. I have tried several plants in pots and cut them back hard, also single plants, and pinched them, but the result in both cases is the same—long shoots with leaves a long distance apart. It appears to belong to the same race as the old Thumbberg and one or two other yellow with graceful flowers but bad habit. What is needed is a really prettily shaped and coloured yellow with the habit and constitution of W. Lincoln.—R.

**Chrysanthemum Calvat's Boule d'Or**. This must not be confounded with the old kind of the same name. In the first place it is a much better grower, judging by plants I noted flower to-day (October 8), and it is also earlier. The blooms are large and handsome, of good build, and very distinct in colour. The low florets droop a little; the inner ones are nice and not too stiffly incurved, and although they are pointed, are yet of good substance. It appears to be a fairly dwarf kind, as plants very little over a yard high were carrying full-sized flowers.—H.

**Chrysanthemum Francois Vuillemet**. This variety, introduced in 1895, after a second season's trial in my own garden, I have every confidence in recommending as a valuable sort to the hardy border. The natural break is usually made when the plant attains a height of about 10 inches and a regular sequence of branches continues until the terminal buds form. Ultimately the plant measures quite 3 feet through and carries a profusion of blossoms each from 2 inches to 3 inches in diameter. The flowers reflex prettily in the early stages of opening, thus causing the rain to run off—a distinct advantage with early sorts in the open. The height rarely exceeds  $2\frac{1}{2}$  feet, and the colour of the flower is best described as deep rose-pink.—D.

**Chrysanthemums and frost**.—We have been visited by several rather severe early frosts in the neighbourhood, and I am told that one rather large Chrysanthemum grower has had many bloom buds frozen right through, and, of course, spoiled. In midland localities I find it unsafe to leave the plants out unprotected after October, but when the bloom is wanted for cutting and late as possible it is not necessary, except with extra large numbers of plants are grown, to take them under glass to be drawn up beneath, perhaps, Peach trees with green foliage on them. A rough framework erected over and around the plants, these being stood fairly close together, and a few coarse Hessian covers rolled over the top, ordinary garden mats being hung up round the ends and sides, will keep 9° or 10° of frost away and preserve the plants, removing them from doors at the end of the month.—NOTES.

**Chrysanthemum Emily Silsbury**.—This is a very beautiful white variety, and one that is worthy of extended culture. In habit it is that which can be desired, and I have large, well-developed blooms on plants less than a yard high. In several seasons I have been trying to make a selection of varieties that keep their foliage well and that one may pinch once or twice and yet get good blooms. Treated in this way, they make plants useful in a variety of ways, but especially when, as in my case, there are large entrance halls or reception rooms to furnish. The kind mentioned is an excellent one for the purpose, the only fault being its earliness. The flowers have a tinge of rose at first, but this they lose with age, becoming pure white. The petals are very prettily twisted in the centre, broad, and of good substance. The build of the flower is good. Many varieties fail to do well the second year, but this does finely. Last season my plants were small and stock rather short, so they were divided and potted up, and though the flowers are,

to be so good on these as from the young plants, they are decidedly useful for cutting just now.

## SOCIETIES AND EXHIBITIONS.

### NATIONAL CHRYSANTHEMUM SOCIETY.

OCTOBER 12, 13, AND 14.

THE early autumn exhibition held at the Royal Aquarium on October 12 and two following days may be regarded as in every way a success. Although there were only sixteen classes, an excellent exhibition was got together. With the exception of a small portion of the ground floor space, the whole of this large area was utilised for the display of the cut flowers and miscellaneous exhibits, the greater portion of the south-west gallery being used for the table decorations. The competition in the leading classes was in every way satisfactory. In the principal classes of cut flowers were in most instances of a high order of merit, the quality in the leading stands being generally characterised as distinctly good. As regards form and size, while the colour in some of the flowers was quite remarkable so early in the season. Hardy border Chrysanthemums were well shown, in no small measure contributing to the success of the exhibition. Novelties were staged in goodly numbers, several promising growers being among them, and of which more will probably be heard later. Some excellent market varieties were seen in the exhibits of the specialists, good colour, pretty form, and flowering properties generally distinguishing them. Hardy fruits were freely staged, vegetables, too, being well shown. Hardy flowers were also represented in fairly good condition, thus assisting to make a very interesting and pleasing display.

#### PLANTS.

FOR a group of Chrysanthemums and fine-leaved plants arranged for effect there were twelve competitors, the leading position being secured by Mr. Norman Davis, The Vineries, Tunfield, Sussex, with a nicely-arranged group of bold and handsome flowers on plants, retaining their foliage very well. The blooms gave evidence of high culture, and included several of the best of the leading novelties. Conspicuous among them were George Seward, Emily Silsbury, John Mylly, Simplicity (pure white) and Elthorne Beauty (a large deep flower of bright rose, with a very reverse). The group was edged with dwarf plants of pompon and decorative sorts, relieved by a margin of Maiden-hair Ferns, a few fine plants of Cocos Weddelliana, Crotons and Nicanas being effectively used. The second prize was secured by Mr. W. Howe (gardener to J. Henry Tate, Park Hill, Streatham Common) with a very handsome group, with which some fine-leaved plants were pleasingly associated. This group was backed by some useful pieces of Imbos.

#### CUT FLOWERS.

THE principal class for cut flowers was for twenty-four blooms of Japanese in not less than fifteen varieties and not more than two blooms of each variety. This was well contested, no less than seven entries being forthcoming. The leading position was ultimately given to Mr. C. Penfold (gardener to Sir F. Fitzwygram, Leigh Park, Hyant), whose front and back rows were finely even, the middle row of flowers rather weak. The best blooms in this exhibit were Beauty of Teignmouth (a variety synonymous with Pride of Madford), Phebus, Mrs. C. H. Payne (large and coarse), Modesto, Edith Tabor, Surprise, Line d'Angleterre, rather coarse; Mme. Gustave Perry, a useful October white sort; Emily Silsbury, Mutual Friend, and M. Chénon de Léché. The second prize was won by Mr. James Agate, nurseryman, Ilavant, for a much more even lot of flowers, the quality being generally considered better than that in the premier stand. Mrs. J. Lewis, large white; Milano, rich bronze and

cherry carmine; Australie, Dorothy Seward, M. Chénon de Léché, E. Molyneux, and Philippe Rivoire, a grand new pure white flower, were the best. There were six competitors in the class for twelve blooms Japanese distinct, the first prize being won by Mr. F. G. Foster, Brockhampton Nurseries, Hants, the quality in this instance being rather poor. His best flowers were Edith Tabor, E. Molyneux and Phœbus, the latter one of the most useful October yellows. Second honours fell to Mr. R. Jones, gardener to Mr. C. A. Smith-Rylands, Barford Hill, Warwick, with a splendid lot of flowers, John Applin, long pointed florets, colour creamy-white, with a yellowish centre, Mme. Edouard Rey and Mutual Friend calling for special notice. Pompons were very poorly represented, Mr. Eric F. Such, nurseryman, Maidenhead, securing first prize in each instance for twelve bunches, not less than six varieties, and three in a bunch, and six bunches distinct with the same number of flowers in each bunch. A far prettier exhibit of these pompons would be obtained if larger bunches were asked for, the present number appearing somewhat insignificant. In the amateurs' A division for twelve blooms Japanese distinct there were only two entries, the first place being taken with an interesting lot of flowers from Mr. R. Gladwell, gardener to Mr. Sydney Smith, The Gardens, Wernden Hill, South Norwood. Oceana, Mme. Therese Rey, Mutual Friend, and Perle Dauphinoise, a golden-yellow, previously shown as an incurved variety, were among his best blooms. Mr. J. Knapp, gardener to Mr. F. W. Amsden, 22, Chichester Road, Croydon, was second. Mr. Gladwell was again first for six Japanese distinct with exceptionally fine flowers of E. Molyneux, Phœbus, and a fairly good flower of G. C. Schwabe. Second prize went to Mr. W. Perrin, gardener to Mr. C. W. Richardson, Sawbridgeworth, Herts, Boule d'Or (Calvat) and M. Pankoncke deserving recognition. For similar classes in amateurs' B division, Mr. Martin Silsbury, Providence, Shanklin, Isle of Wight, and Mr. H. Love, 1, Melville Terrace, Sandown, Isle of Wight, were placed first and second respectively, the latter exhibitor showing a rich reddish-bronze flower cut from the variety Matthew Hodgson, and which looks very much like a sport from that excellent sort.

#### TABLE DECORATIONS, &c.

THE chief class in this section was one for a table of bouquets, wreaths, sprays, button-holes, &c., to illustrate the decorative value of the Chrysanthemum. There were two competitors, the highest honours falling to Miss Nellie Erlbach, "Chards," the Florist, Stoke Newington. Numerous devices were well illustrated, including four handsome bouquets, a grand lyre, anchor, and an enormous vase in the centre of the table, finishing off with sprays, button-holes, and hand-baskets. Yellow, orange, and crimson flowers were mostly used. Mr. E. F. Such was a somewhat poor second. There was a splendid competition in the open class for three epergnes suitable for table decoration. The premier prize was won by Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate, N., who had three elegant arrangements. The centre epergne, a new design of his own, and a portable one, was very light and pleasing, flowers of bright crimson, bronze, orange, and yellow colours being associated with Ampelopsis Veitchi, Scarlet Oak, Braeken, and other foliage having autumnal tints, and Maiden-hair Fern, Croton foliage, and Asparagus. Second prize was awarded to Miss C. B. Cole, The Vineyard, Feltham, Middlesex, also with a pretty trio of epergnes, each lightly arranged with fresh and clean blooms of good colour and daintily finished. For two large vases, each to contain twelve blooms of large flowering varieties, there were five competitors. Each exhibitor used Japanese blooms exclusively, and they made a bold and noble display. Foliage, &c., was allowed for their embellishment. First prize was secured by Mr. J. Brookes, gardener to Mr. W. T. Newman, Totteridge Park, Totteridge, with a pair of even vases carefully and tastefully set up. The blooms were of high quality and foliage was

pleasingly associated. Mr. Norman Davis was a good second, and had he spent more time in setting up his flowers, the chances are the result would have been reversed. This is a class that might with advantage be extended. The remaining class was one for a vase of Chrysanthemums suitable for table decoration, vase not to exceed 18 inches in height. There were five competitors in this. First place was given to Mr. T. Tullett, gardener to Mr. G. Alexander, Warley Lodge, Brentwood. This was rather a formal arrangement, with a great mixing of the colours and consequent lack of beauty. Mr. Crane was second, using white and bright crimson flowers, with suitable foliage and grasses.

#### MISCELLANEOUS EXHIBITS.

THESE at the early shows usually make a fine display, and on this occasion were no exception to the rule. The gold medal of the society was awarded to Mr. W. Wells, Earlswood Nurseries, Redhill, for a very good display of flowers. The exhibit was arranged in the form of a large circular group, with a twelve-board of exhibition Japanese blooms arranged at four points, equi-distant. The colours of the blossoms and their finish were all that could be wished for. The flowers of M. Hoete, Pride of Madford, M. Chénon de Léché, and other novelties were excellent. Mr. W. J. Godfrey, Exmouth, Devon, had his flowers arranged on twelve boards besides two dozen bunches of Carnations. The Chrysanthemums were very good for so early in the season. Vicomtesse Roger de Chezelles, Baronne A. de Rothschild, Mme. Philippe Rivoire, W. Prince, Mrs. Laycock, C. B. Haywood, and other new and promising sorts were good. This exhibit well deserved the silver-gilt medal awarded to it. Mr. H. J. Jones, Rycroft Nursery, Lewisham, S.E., had a very large table of Chrysanthemums in huge oriental vases, with fifty bunches hardy border sorts and seventy-two bunches zonal Pelargoniums, all set off with Ferns and other fine-leaved plants. A silver medal seemed a scant recognition of this display. Mr. Norman Davis staged a nice collection of Chrysanthemums, including a grand market variety named Klondyke, a rich golden-yellow Japanese of good form with recurring florets. The growth is very similar to that of the well-known Elaine. Mr. E. F. Such also had a nice table of hardy border Chrysanthemums, including capital bunches of Roi des Preoces, Mme. Zephir Lionnet, and Coral Queen. Messrs. H. Cannell and Sons put up a nice group of Cannas, including most of the best sorts, and in addition a fine lot of their new yellow Chrysanthemum Soleil d'Octobre, Milano, and others. A pretty little flambiated pompon, Golden Gem, was much admired. For these together with a very fine collection of vegetables, a silver-gilt medal was awarded. Messrs. J. Laing and Sons received a similar award for a collection of hardy plants and a grand collection of Apples and Pears. The Iethemic Guano Company again decorated the southern fountain and received a similar award. Messrs. Spooner and Sons, Hounslow, and Mr. H. Berwick, Sidmouth Nurseries, Sidmouth, Devon, for Apples and Pears, &c., each received an award of a silver-gilt medal; silver medals falling to the lot of Messrs. John Peed and Sons, West Norwood, for Apples and Pears, and Mr. T. Ware, Hale Farm Nurseries, Tottenham, for Asters and other hardy flowers.

IN other years the Dahlias have very materially assisted to make a bright display, but probably, owing to recent severe frosts, these were not in evidence, but this misfortune was amply compensated for by the interesting and fine display the miscellaneous exhibits made.

A meeting of the floral committee of this society was held on Tuesday last at the Royal Aquarium, Mr. T. Bevan in the chair. Some very good flowers were staged, and first-class certificates were awarded to the following:—

CHRYSANTHEMUM M. GEO. BRUNT.—An immense Japanese with great length of floret, colour pale rosy purple, darker towards the tips, centre white. Shown by Messrs. Pearson and Sons.

**CHRYSANTHEMUM VICOMTE ROGER DE CIEZELLES.**—Very large Japanese; centre florets incurving at the tips, golden yellow, shaded bronze, reverse silvery yellow. From Mr. W. J. Godfrey.

**CHRYSANTHEMUM AMBROISE THOMAS.**—A decorative Japanese; deep reddish crimson, pointed thin florets. From Mr. W. Wells.

A variety called *Soleil d'Octobre*, a compact, large Japanese of a pretty shade of pale yellow, was commended. Mme. Philippe Rivoire and Mrs. Barclay were also promising.

**Royal Horticultural Society.**—We learn that Her Majesty has been graciously pleased to confer the Diamond Jubilee medal upon Sir Trevor Lawrence, Bart., President of the Royal Horticultural Society, Her Majesty being herself patron of the Society. The next meeting of the committees will be held on Tuesday, October 26, at the Drill Hall. At 1.30 punctually the president and council entertain at luncheon the sixty recipients of the Victoria Medal of Honour. The lecture announced for the 26th will be postponed, and instead thereof, at 3 o'clock the sixty medals will be distributed to the recipients by the president in the Drill Hall.

The dates fixed for next year's meetings are as follows: 1898, January 11, February 8, March 8 and 22, April 12 and 26, May 10; Temple show, May 25, 26, 27, June 14 and 28, July 12 and 26, August 9 and 23, September 6 and 20; Fruit show, Crystal Palace, September 29, 30, and October 1, 11 and 25, November 8 and 22, December 13. Any gentleman willing to deliver a lecture on any of these dates would greatly oblige by communicating at once with the Secretary, 117, Victoria Street, S.W.

## NOTES OF THE WEEK.

**Hollyhocks.**—It is pleasing to note the tall spikes of these showy plants quite uninjured by the severe frost recently, and though the flowers are by no means so numerous as in the heyday of their beauty, yet the few that remain are welcome for their brightness now so many of the showy plants are cut down.

**Tufted Pansy Bullion.**—Among the many Tufted Pansies that we have, this one may be said to be always in flower. Week after week and month after month the plants continue to give an ever-increasing supply of golden-yellow flowers, and even now the glossy little tufts are rich in colour and still contain as many buds as do many kinds in the height of their flowering season.

**Chrysanthemum Rycroft Glory.**—Though one of the most free among yellow-flowered kinds, the above is not early enough for outside use, which, from this point of view, lessens its value. Could it be induced to open its flowers so as to be at its best at the end of September, it would prove of considerable value in the open. A day or two since, however, this variety was only opening the earliest flowers.

**Chrysanthemum Mm<sup>s</sup>. M. Masse.**—For producing masses of colour from the middle of September to the present time this lovely kind surpasses all else. Apart from the rich store of blossom, the variety also possesses great lasting properties, which, as a garden flower at this time, cannot well be over-estimated. The flowers are of a rose-mauve shade with silvery margin, the heads of blossoms being borne on well-disposed branches, which are not more than 2½ feet high at the most.

**The Choke Berry (Pyrus arbutifolia).**—I send a few sprays of this to show how fine it is, large breadths of it in damp soil, in which it runs about freely, are most brilliant. It is most at home near the water-side.—T. SMITH, *Newry*.

\*\* The leaves on the shoots of this are of an intense scarlet hue. It is one of the most valuable of the many shrubs that take on a rich colour in autumn, and like many of these, it is a native of North America.—Ed.

**Rudbeckia subtomentosa.**—Late as is the season now, it is pleasant to see how bright is this pretty Coneflower. It is known I believe as the "Hay-scented Coneflower," and the plant appears to possess in some degree the odour of

new-mown hay. It grows about 3 feet high in the light soil here, and is usually much admired, the dull grey-green of its leaves looking well among other plants when surmounted by its yellow flowers with dark centres. Like the others of the genus it is a native of North America.—S. ARNOTT, *Carsethorn, Dumfries, N.B.*

**Aster Ariadne** is probably one of the finest of the *Novi-Belgii* group. It is for small borders perhaps a trifle tall, as in good soil it attains to 5½ feet or thereabouts. But the pleasing and graceful habit, which is not at all dense, is sufficiently strong that no staking is needed, and the result, when planted with a free hand, is charming. The flowers are large and of a pleasing dark blue shade. It is among the finest in the Royal Gardens at Kew, where a lovely group 10 feet across may be seen in perfection.

**Campanula Hendersoni Tymonsi.**—In the flowers individually there is a good deal of *C. Hendersoni*, apparently one of its parents. In other respects the plant differs considerably, being taller and producing an almost pyramidal panicle of blossoms. The woolly and distinct foliage partakes somewhat of the downy character of that of *C. sarmatica*, though the leaf character is distinct even from this. But whatever its parentage it is certainly a most useful and beautiful plant, and after producing its quota of summer flowers on stems some 18 inches high or more, the plant is now bearing quite a number of flower spikes at this season, when most *Campanulas* are practically at rest. The plant is evidently a better grower than *Hendersoni* in many instances.—E. J.

**Early-flowering Chrysanthemums.**—Now that the dull October days are with us and the beauty of the garden is on the wane, it is pleasing to turn to the early-flowering *Chrysanthemums* now in their full beauty in the open. After the severe frosts of the past few days which have cut down all the Dahlias, the early-flowering *Chrysanthemums* are still uninjured and continue to open freely. In order to see these at their best, let them grow naturally with no disbudding. In this way huge bunches containing five and six blooms may be had for the decoration of the house. Another valuable characteristic of these early-flowering varieties is their lasting properties when cut. Messrs. Dobbie send us from their seed grounds at Rothesay a great number of varieties in splendid condition.

**Naming hardy plants.**—Much as this is to be desired when rightly applied, it is, on the other hand, to be deplored when names are given to varieties that do not possess as much merit as the species from which they came. There is this tendency at the present time in multiplying an already numerous family, viz., the *Starworts*, and in more than one direction. Last week we noted it at the Drill Hall, where a variety, to all intents and purposes identical with *A. N.-B. lævigatus*, had received a distinct name. Singularly enough, the attempts appear more generally with the *Novi-Belgii* section, or the Italian kind, *A. Amellus*; the former very numerous and the latter difficult to equal, much less surpass. But bearing seed freely is a possible temptation to some, and the true *Aster Amellus* and *A. A. bessarabicus* are so good in themselves that it seems a pity to attempt to circulate more or less inferior forms, while the best may be had in equal quantity from cuttings or division.—E. J.

**Pyrethrum uliginosum.**—This plant has been more than usually gay this year, the great masses of pure white bloom at 6 feet high being seen at a great distance. It is occasionally referred to as being too tall, and stopping the shoots is recommended. Those who want to make a dwarf plant of this should let it grow naturally till early in June, and then cut it down to within 9 inches of the soil. When this is done the plant flowers at less than 3 feet high, and with perhaps only three days' difference in the opening of the blooms. Too frequently, in place of this cutting down, the points of the shoots are removed as in the *Chrysanthemum*, this, how-

ever, only producing a greater number of smaller flowers. By cutting the plants down, several shoots quickly appear on each stem, and if half of these are removed at once, the result will be a fine mass of pure white at nearly 3 feet high. In this way the plant may be used even in quite small gardens, from which it is now excluded owing to its great height.

## OBITUARY.

MR. W. A. STILES.

WE have to record with much regret the death of Mr. W. A. Stiles, the editor of *Garden and Forest*. The esteem of his fellows is fully shown in the notices of his death in the New York papers, among them the following in the *Evening Post*:—

The death of Mr. William A. Stiles, the Park Commissioner, is a distinct loss to the city. He was one of those rare men in official life upon whom you could always depend for wise and just action. During the brief time that he was in the Park Board he made his influence felt in all directions of park control and development. He was an enthusiastic student of the work which he had in charge, and, in spite of constant ill-health he was untiring in his efforts to bring about good results and thwart all others. Nobody who has not kept close track of park matters in this city knows how incessant and insidious are the efforts of the vicious and the ignorant to despoil and deface the parks in one way or another. A park commissioner who has both the expert knowledge and the disposition to fight these attempts successfully is a very rare possession, and his leaves a vacancy which it is difficult to fill.

He was selected as editor of *Garden and Forest* when it started, and very ably occupied the post. He was a graduate of Yale College and the Rev. J. H. Twitchell writes of him as a classmate:—

During all the years since his graduation the presence of no man at Yale gatherings has been more desired or more welcome. To the friends of his youth, his classmates in particular, his memo is dear, and he was distinguished among them for his shining and various talents. He was at the same time a sprightly, merry soul, overflowing with wit and humour, the very genius of good fellowship. He was sensitive, sympathetic, and true-hearted, and drew to himself a rare quality of affection, which more intimate acquaintance with him never failed to deepen. Moreover everyone who knew him well soon discovered the underneath his vivacity were a thoughtful mind and temper of moral earnestness, by which respect was added to affection. The world held no more delightful, choice, and beloved spirit; not that leaves a sweeter memory.

When wanting a rest through illness two years ago he made a very short visit to England—flying visit it was, but sufficient to impress with his sympathetic and bright nature. He was in the time of wild Rose bloom, and as he rambled among them together his pleasure being among our English wild Roses was given to see. He will be much missed.

**Names of fruit.**—*J. R.*—Apple Colonel Vaughan, Kentish Pippin.—*Dinder*.—Apples: 1, 1 recognised; 2, Tyler's Kernel; 3, Warner's King; Tom Putt. Pears: 5, Brown Beurré; 6, Beurré Rance.

**Names of plants.**—*A. Killen*.—1, specimen too poor; may be *Aster laevis floribundus*; 2, *A. diffusus*; 3, *A. acris*; 4, *A. multiflorus*.—*M. S. P.*—1, *Osmanthus aquifolium*; 2, *Ilex opaca*; 3, *Caryopteris mastacanthus*.—*W. C.*—1, *B. orientalis*; 2, *Thuja occidentalis*; 3, *Phillyrea v. moriniana*; 4, *Cupressus Lawsoniana*; 5, *Retinospora pisifera*; 6, *Andromeda floribunda*.—*Shedfield*.—*Aster ericoides*.—*Eustace F. Clarke*.—1, *Alonzo incisifolia*; 2, *Alonzo albiflora*; 3, *Achillea ptarmica*; 4, *Cypripedium insigne* Clantini.

# THE GARDEN.

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## ORCHIDS.

### NOTES ON PHALÆNOPSISIDS.

Orchids have puzzled cultivators more in instances, while in others their culture is very simple. In the same place and with the same grower one plant grows well and another fails to do so, while in some houses apparently well suited to them and where other Orchids from the same country thrive the *Moth* Orchids refuse to grow. The reason is not far to seek, but it is very difficult to give any directions that will enable amateurs to grow their satisfactorily. So little stands between success and failure, that everyone must to a certain extent experiment for himself, and when the most suitable place for the plant is found, leave it there, and endeavour by careful attention to small cultural details to keep it in health. Phalænopsids are naturally very free-rooting plants, as seen by the disposition of the roots to run in long straight lines rather than curve about the side of a basket, and this doubtless accounts for a great many failures. It needs no great stretch of imagination to picture a plant in its native home pushing for yards in length up or down a tree trunk and the foraging capabilities of such roots may be very greatly in excess of any that can possibly be produced under cultivation. Some may say, fasten the plants to long poles, and thus as been tried, but the difference between a living tree and a pole is much the same as between the climate of the habitat and that of our orchid houses. This being the case, it is obviously impossible to follow Nature with regard to the rooting medium, and although it is seen at first sight bad practice, I am of opinion it is much better, instead of using long cylindrical baskets, and so encouraging the long roots, to induce them, on the other hand, to ramify as rich as possible by presenting a rough, broken surface to them. This is most easily effected by using pots or baskets of ordinary material almost filling these with rough crocks and

charcoal and allowing a thin layer only of clean Sphagnum Moss. The size of these receptacles will, of course, vary with that of the individual plants and also the different species, for no one would think of treating the vigorous *P. Schilleriana* or *P. amabilis* on similar lines to *P. Lowi*. Atmospheric moisture is very necessary to the cultivation of Phalænopsids; not only must it be plentiful during the growing season, but it must be used to soften the dry atmosphere in winter caused by the sharp application of fire-heat required to keep up the temperature. Ventilation, fire-heat and moisture must, in fact, go hand in hand, so to speak. A house kept close and moist is quite as unsuitable to these Orchids as one kept draughty and cold. When it becomes necessary to use fire-heat, keep a little air on as well and damp freely so as to cause a nice evenly-balanced temperature. In late autumn, especially when every bright day is anxiously looked for by careful cultivators, the sunlight may be made the most of by these means, not by shutting the house up close, as some advise. A few degrees of warmth are of course saved by the latter proceeding, but it is at the expense of the consolidating influence of the sun's rays, and this is a very important consideration. The leaves by this time will be getting fairly hard, and no shading will be required if this has been systematically reduced. From the end of August onwards a gradual diminution is required, while after the first bright days in March it will not be safe to leave the blinds up entirely. When growth recommences the condition of the foliage is soft and tender, and it is just then that the most shading is required. During the heat of summer the blinds must be kept off the roof as long as possible in the morning, the foliage meanwhile having been kept cool and dry by early morning ventilation; then by taking off a certain amount of the air and lowering the blinds, a calm, moist state of the atmosphere is easily maintained without an approach to stuffiness. Watering at the root needs care and judgment. Few Orchids like more moisture when root action is

really brisk, but they are easily injured by over-watering when at rest. All the year round a certain amount must be given, but with a cold wind perhaps blowing outside and a rather lower temperature in early morning than is desirable, one always feels easier if the roots are a little on the dry side. The details must, as mentioned above, be largely left to the individual grower, and will vary according to circumstances, such as the position of the house and its aspect, but it is well to keep in mind the few more cardinal points above noted. R.

**Oncidium divaricatum.**—This is a pretty species when well grown, the long branching scapes having a light, elegant appearance, although the blossoms are small individually. It has clear yellow flowers, these being spotted about the base of each segment with bright crimson. It requires a good long season of growth, and after this a decided period of rest, and during the latter the roots may with advantage be kept well on the dry side. During summer a full supply of moisture is necessary, and for this reason a rough open compost must be allowed.

**Oncidium aurosum.**—Flowers of this species come from a correspondent for a name. It is one of the long-branching flowered kinds having pseudo-bulbs about 4 inches high, bright green leaves, and blossoms of a bright golden yellow, lightly spotted with reddish brown. It is a native of Peru and Guatemala. It is not a difficult plant to grow, and thrives in a cool, light house. The compost may consist chiefly of peat and Moss, with plenty of crocks and charcoal added. Pot in medium-sized pots, and give plenty of water at the roots during the growing season and abundance of air all the year round.

**Cypripedium amandum.**—This is a pretty hybrid of the easiest culture, and quite as hardy and free as the good old *C. insigne* or *C. venustum*, from which it was raised. Plants here have been growing in a greenhouse all the season with the usual occupants of such structures and no special care, and they are now flowering finely. The foliage is more like that of *C. insigne*, but with a few dark markings. The flowers are of medium size, the dorsal sepal light green, with

deeper stripes and large spots, the pouch prettily venated, not unlike that of *C. venustum*. It first flowered with and was raised by Mr. Bowring, of Windsor.

**Epidendrum purum.**—Although not a showy plant, this has many good points, not the least of these being its delicious fragrance and long-lasting qualities. The habit of the plant is tufted, the stems rising about a foot high, and from the top of these occur the branching racemes of pale yellow blossoms. The plant is not difficult to grow, thriving and flowering freely at the cool end of the Cattleya house. It should be potted in rough peat and Moss over good drainage, and requires plenty of moisture. It is a native of Colombia, and was first introduced in 1844.

**Dendrobium album.**—The blossoms of this species are not exactly pure white, but some of them have very little colour in them. They are usually of a creamy tinge, the centre of the lip being yellow and produced towards the end of the growths in racemes of two or three. The stems grow horizontally or pendent, not unlike those of *D. chrysanthum* in appearance, and, like this species, it may be grown in a warm, moist house not far from the roof-glass. Fairly large wooden baskets and a rough open compost suit it well. *D. album* is a native of the Nilghiri Hills.

**Zygopetalum Gautieri.**—This handsome species is now blooming freely, the fine showy blossoms showing well upon the deep green foliage. In habit it differs from *Z. maxillare* and similar kinds, being almost intermediate between these and *Z. Mackayi*, but the blossoms are among the showiest in the genus. The sepals and petals are yellowish-green with heavy chocolate markings, the lip varying in colour, but usually of a bluish-purple, fading to white. Like the species noted above, *Z. Gautieri* likes a piece of Tree Fern stem, and, failing this, a basket made wide rather than deep, and a thin compost. It does well in the Cattleya house and is a native of Brazil, whence it was introduced in 1868.

#### CATTELEYA LABIATA.

THE earlier blossoms of this species are now in perfection, and each season its splendid constitution and free-flowering characteristics are more apparent. As is well known, the flowers are among the best, both for size and colour, and this, combined with the fact of their filling up a break of a couple of months at least, which before its re-introduction were not remarkable for wealth of bloom on Cattleyas, makes it a favourite plant everywhere. The latter point is in fact a great recommendation, for though there are kinds blooming between *C. Gaskelliana* and the earliest forms of *C. Trianae* and *C. Percivaliana*, these are by no means remarkable for their free-flowering qualities. It comes nearest the former useful kind in habit and general characteristics, but a noticeable point is the double sheath, though this is not always present. In colour the flowers range over a great variety of tints, from the lovely albino form to others of a very deep rose on the outer segments. Its culture presents no special difficulty, and anyone who is successful with the *C. Mossiae* or *C. Mendeli* groups may with every confidence take up its culture. It is a fairly vigorous rooting plant, and well-established specimens should be given fairly large pots, though for the first year or two the rooting medium need only be thin. Good peat and Moss in equal proportions and plenty of rough nodules of charcoal will grow it perfectly provided the drainage is in good order and the plants are carefully watered. During the time growth is most active a light sprinkling with tepid water from the syringe does good on very hot days, but during dull weather and while the leaf is issuing it must be discontinued, otherwise it is apt to collect in the cup that is formed thereby and to damage the plant by damping. *C. labiata* is a species that keeps well to its annual routine of growth and rest, and possibly this in a measure accounts for its satisfactory condition in collections.

The plants like plenty of water at the root as long as the compost is in good order, but naturally much less is needed during the winter than in the growing season. Its culture, in short, is of the simplest possible description, and it will doubtless long continue to be a popular Orchid. It has been known since 1818, in which year Mr. Swainson sent it home from Brazil, but until very recently it was very rare, dozens of collectors having searched in vain for its habitat.

**Gongora atropurpurea.**—This Orchid seems nearly always in flower, one spike being hardly over before another appears. The flowers are not large individually, but very interesting in structure, and their deep reddish or port-wine colour is rather unusual. The pseudo-bulbs are large, pale green, very deeply ribbed, and each bears a pair of leaves of hard texture, about 4 inches wide. The roots are very freely produced in a suitable compost, often pushing in an upright direction like those of a *Grammatophyllum*. I like it best in teak baskets suspended not far from the roof glass in the Cattleya house, as here the pendent or arching spikes show nicely. The compost may be of a fairly sound description, a little loam fibre doing no harm if mixed with twice its bulk of peat and Moss for strong plants. Crocks or charcoal must be freely mixed with these materials, and drainage is a very important item. Few Orchids require more water than this during the growing season, and in a warm, moist house the plants may with advantage be somewhat heavily syringed overhead. In the genial temperature thus produced growth is very rapid, and red spider, thrips, and other insects sometimes affecting the plants are by this means easily kept away.—R.

**Oncidium Forbesi.**—This beautiful plant is now in good condition, the fine branching spikes carrying a large number of flowers. These are large individually, bright shining brown, with a golden yellow margin, prettily undulated. It is one of the most beautiful of *Oncidiums*, and a plant well worthy of the utmost care. But this, unfortunately, will not make *O. Forbesi* a success under cultivation. I have tried it in various temperatures and under different modes of potting and basketing, but the result is not satisfactory over many years. It is true that this Orchid is more often than not killed by the thoughtless plan of leaving the flower-spikes on until they fade, this weakening the strongest plants and often killing weaker ones outright. Still, with the best of care it is a difficult plant to grow, and I have known plants that one season plumped up immense bulbs the next year refuse to grow at all. The likeliest place for it is a light, airy position not far from the roof glass and near a ventilator in the Cattleya house. It must have a diminished supply of water at the roots during winter, but must not be entirely dried off. It dislikes much material about the roots or frequent disturbance; consequently when repotting is done the drainage should have especial attention and only lasting material used.—R.

**Dendrobium bigibbum.**—Although this fine Dendrobe has been in cultivation since 1824, when it is said to have flowered at Kew, it was not much known until 1855, when it was discovered by Dr. Thomson in one of the islands in the Torres Straits. It is one of the finest of the Australasian kinds, the spikes of rich magenta blossoms appearing during this month from the apex of the young pseudo-bulbs and occasionally from the older ones as well. *D. bigibbum*, like many others of the same section, often begins to grow in late autumn, and for this reason should be kept fairly warm during the winter months. Keep the plants on the move when once they have started, but endeavour, by allowing plenty of light and air, to consolidate the growth a little as it is produced. A short resting season is of great advantage in summer if it can be arranged, not by drying the roots, but by taking the plants out of the warmest house to one a few degrees

cooler during the time growth is inactive. The plants should be allowed a light, sunny position not far from the roof glass, and are best potted in small baskets or pans. The root must not care for a great thickness of material about them, and about an inch is ample for all but large specimens. The best time to repot is in early spring, when the young bulb is about formed and is commencing to root freely on its own account.

## STOVE AND GREENHOUSE

### AZALEAS GRAFTED ON RHODODENDRONS.

IN the year 1884 M. Seidel, senior, first suggested to his son (M. Rudolph Seidel) the idea of grafting the Indian Azalea on a Rhododendron stock, and, as an experiment, they were gentlemen, with the assistance of their friend, M. Lauterbach, made a dozen grafts of the description. At that time M. Seidel had the doubt that this operation was the first step towards a thorough revolution in the culture of Azaleas, and that it would come into general practice. It was certain that it would not be adopted anywhere at once, and the greatest difficulty was that of securing for it a favourable reception in the horticultural world. So indeed, it had to encounter criticism, when, in the year 1894, M. Seidel showed for the first time, at the exhibition at Gand, the specimens which had been grafted in 1884. For vigorous growth, fine appearance, and unusually flowering qualities these received a certificate of merit for advancement in the culture of Indian Azaleas. Notwithstanding this, M. Seidel returned home to Saxony under a cloud of adverse criticisms. The Belgians, and other people as well—nearly everyone in fact—asserted that these plants could not live, and that many varieties of Azaleas would unite imperfectly with the Rhododendron stock, so that they would be easily broken off in packing and in transit. Numbers of objections were made which had no foundation, the matter was merely in the initial stage of development, and criticism could only suggest assumed possibilities. In spite, however, of all the hostile criticisms, Azaleas grafted on Rhododendrons made their way into favour. In the year 1894 M. Seidel offered some specimens for sale, which, on account of their vigorous habit of growth and the fineness of their flowers, which surpassed that of the ordinary Azaleas in beauty and regularity, were so much preferred by purchasers, that every year since M. Seidel has received more orders for plants than they have been able to supply, and to meet these daily increasing orders they have this year grafted 40,000 plants.

I do not know whether the critics still think that Azaleas grafted on Rhododendrons are of no value, but in any case I think they will not lay down their arms and join with those who have adopted this system, considering that the last autumn plants grafted in this manner, their way into the forcing houses at Berlin (where Azaleas grown in the ordinary way had previously held the field without a rival) gave great satisfaction there. Of course this does not imply that no other kind of Azaleas will be forced there, but the numerous specimens which will be given this year by these Berlin forcers will show at least the advantage, if not the superiority, which is attached to this system.

The objections which were made against this system have been proved entirely unfounded, for up to the present Azaleas grafted

we have done quite as well as those grafted on the Azalea stock, and always grow more vigorously. One cannot, of course, be certain that they will live as long as the old-fashioned kinds, one of which are now sixty years of age, while one of the plants grafted on the Rhododendron stock are as yet more than thirteen years old. But even if they should not live for more than twenty years, the high reputation which they are gaining will suffer nothing in consequence, since Azaleas of that age are of very little use in a commercial point of view. It is quite true that certain kinds which, like *Souvenir du Prince Albert*, unite very badly when grafted on Azalea concinna or other Azalea stocks may not take well when grafted on the Rhododendron stock; but the number of such kinds is so small, that no difficulty will be thereby raised in carrying out this system of grafting, and the circumstance cannot be considered a drawback. We may then come to the conclusion that this new method of grafting has a great future before it, and it would not be surprising if, in the course of time, it entirely superseded the other methods which are at present in use. Up to the present no attempt, at least so far as I am aware, at this method of grafting Azaleas has been made in France, but the florists of Paris may take heart, for undoubtedly they will soon be able to furnish their shops with these superb plants. M. Duval, the well-known nurseryman at Versailles, was this year to have commenced his first essays in this method of culture, which, with such a skillful operator will no doubt be crowned with success.

I will now describe the means which are employed in MM. Seidel's nursery for obtaining the plants as speedily as possible by this method. The only variety of Rhododendron which is thus used as a stock is *R. Cunningham's White*, because, rooting well and growing vigorously, it yields excellent stocks on which the Azaleas take very well. The Rhododendron cuttings are taken in November and December, and, as far as possible, from wood a year old and in a good healthy condition. If cuttings are plentiful, the upper part of the stock only is used, for this part produces the best stocks, growing more rapidly and regularly than those obtained from any other part of the shoot. The cuttings are planted in a warm house on shelves covered with a layer of sand 4 inches deep, topped with about a quarter of an inch deep of peat very finely crushed. These shelves are naturally closed in, and are warmed underneath by pipes or otherwise, so as to have a bottom-heat of from 69° to 76° Fahr. The atmospheric heat of the house should be kept under 69° as much as possible. It is necessary to shade when the sun is shining, even in February and March, in order to keep the temperature down to this, as a high temperature induces thrips. The cuttings take root in about 6 months, but usually they are not potted off until the following April, when they are potted in 4-inch or 3½-inch pots. The newly-potted plants are then placed in a house with some bottom-heat under them to expedite their taking root. After on they may be placed close together in frames, where they will be able to increase in length as they grow, as they must be grafted in the winter following, when they should have a stem as slender as possible and at least 6 inches or 8 inches long. Grafting may be done from January to April. For this purpose the cuttings are placed in a house with a temperature of 69° Fahr., where in a few days they will be growing vigorously, with an abundance of sap flowing in their tissues. This is the right time to graft so as to ensure that the Azalea

scion will speedily unite with the Rhododendron stock. The mode of grafting employed is plain whip-grafting, such as is practised, in July and August, when *A. concinna* and *A. Hexe* are used as stocks. The treatment after the graft has taken is precisely the same as that described at p. 47 of *Le Jardin* for 1896, except that these small plants are planted out in the open ground in May or June, and instead of being potted in the autumn before they are sold, they are not potted until spring, so that they will have been only six months in pot instead of a year. Another difference worth mentioning is that these plants sell for nearly double the price of plants of the same age grafted on *A. concinna* or other stocks, because they are more vigorous growing and of larger size, and exhibit a regular and robust appearance which recommends them to all good judges of plants.—E. TREILLAUD, in *Le Jardin*.

**Cineraria eruenta.**—Though hybridising has done great things in improving the flowers of this plant, none of the present-day kinds have the pretty elegant habit of the old species. I saw it a day or two since flowering very freely, and I think that even now its beauty and continuous flowering should ensure it a greater amount of care. The foliage is roughly heart-shaped, pale green above, purple beneath, the flowers occurring on loose heads nearly the whole year round. It is very easily grown, as it thrives in a cool greenhouse, if not starved at the roots, and kept free of insects.—H.

**Fuchsia Dr. Shaw.**—This is a very fine variety raised at the Clifton Zoological Gardens, Bristol, by Mr. G. Harris, the superintendent of the gardens. The tube and sepals are blush, with a pink reverse to them; the corolla, which is large, well expanded and of the finest form, is of a pale purple colour, with a distinct carmine heading. It is an excellent grower and blooms very freely. I was much struck with it when I recently saw it in one of the plant houses in the gardens. Mr. Harris has other seedlings, good growers and very free blooming, and of decided value for his purpose. The gardens form a delightful lounge, and there is a large, varied and valuable collection of hardy Ferns to interest such as are attracted by them.—R. D.

**Salvia splendens grandiflora.**—The brilliantly coloured *Salvia splendens* and its varieties flower at a time when they are particularly valuable, that is just before the bulk of the Chrysanthemums come in, and when many subjects that have bloomed throughout the summer are on the wane. The variety *grandiflora* was shown in grand condition at the meeting of the Royal Horticultural Society on September 21. It is altogether superior to the ordinary form, as not only are the flowers larger, but the calyces as well, and also the spikes of blossoms. In the case of these *Salvias* the flowers are not of long duration, but the calyces, which are of the same colour, remain fresh and bright for a long time. They are all of easy culture, and by some are planted out during the summer months, and potted just before the flowering season.—H. P.

**Lachenalias in autumn and winter.**—Many gardeners who grow *Lachenalias* well stand their plants in the open for a time after repotting the bulbs in September. This is a good plan, but they should be removed to frames early in October, as cold and wet together do not suit the roots. When in frames, however, full exposure by day should be given in fine weather, drawing the lights on at night. The less codding *Lachenalias* have the better, and when put into the greenhouse at the end of October, they should have a very light position near the roof-glass. I have seen them subjected to slight heat in spring to induce an earlier expansion of the bloom-spikes, but to have them in the best form and the foliage stout and dark coloured, a cool atmosphere from first to last is necessary. *Lachenalia*

*Nelsoni* is a beautiful variety for pot culture, its tall well-furnished flower-stems of pure yellow having a fine effect in spring. The old tri-color, however, is still one of the best for growing in pots, also for growing in baskets for the conservatory.—J. CRAWFORD.

**Costus igneus.**—It is really surprising that this beautiful Gingerwort is not more often met with in gardens, as it is of the easiest culture and maintains a succession of blossoms for a lengthened period, while the colour—a rich orange—is pleasing and decidedly uncommon. For some years now it has been grown at Kew, where in one of the stoves it was recently flowering very freely. It is a native of Bahia and was introduced by M. Linden in 1882. This *Costus* forms a stout root-stock from whence sturdy stems are pushed up. When confined in pots it will flower freely when not more than 18 inches high, but planted out in a warm house it will attain a considerably greater height. Like many of its allies, the blooms of this *Costus*, which are each about 2 inches across, are thin and do not last long, but a succession is kept up from one head for a considerable period. It grows freely in a light open compost and requires copious supplies of water during the summer months.—H. P.

**Early pot bulbs.**—In many gardens both Roman Hyacinths and Paper-white Narcissi are brought forward as soon as possible, the blooms being wanted to take the place of the general run of outdoor flowers. Both these subjects when potted early in September will now have grown considerably, and will need removing from the covering of leaf-mould or ashes. It is a mistake to take them straight from such quarters into light and much heat. My plan is to stand the pots on a brick kerb in a cool house, and to cover them with another pot inverted. A little light can then penetrate through the hole of the pot, and in about ten days the plants may be fully exposed. A fortnight in this temperature, previous to placing in the forcing house, will secure stout, well-developed blooms with few blind growths. Some place the pots in a frame on an ash bottom, fastening a couple of garden nets over the light to secure partial darkness. This plan answers very well.—GROWER.

#### PANCRATIUM SPECIOSUM.

Will you please say what treatment I should give *Paneratium speciosum* to get it to flower about the end of July next year? It has just now finished growth. There are twelve bulbs in a 12-inch pot and well established.—W. DAVIS.

\*\* To get your plants to flower next July will be an easy matter if the growth made this year is well ripened. By the term well ripened, we mean this new growth must be well developed before you attempt to rest or keep the plants quiet. On the other hand, twelve bulbs in a 12-inch pot are too many, as the bulbs must be small for that sized pot to contain them. You give us no idea as to size of bulbs or age, and we can only surmise that they are young. The usual plan is one bulb in an 8-inch pot, or three in a 12-inch. This is the size of flowering bulbs, but it does not follow your plants will fail to flower in the pot named, as they often bloom much better if the roots are restricted. On the other hand, there must be a fair-sized bulb before the flowering stage is reached. You say your plants are well established, but in a young state they grow freely, and by this we fancy the pot is quite full, and under the circumstances named you will be unable to get very good bulbs in so restricted a space. There is not room for the bulbs, and there will be too much crowding. We should be inclined to make at least three pots of the plants another season, repotting just before new growth begins. Failing this you may shift on into a larger pot, but we fear unless you thoroughly understand their culture you will not find it so successful as three or four bulbs in a smaller pot. You see it is impossible for the bulbs to attain size with so many in a pot, and you cannot get fine spikes till they are of a good

size. On the other hand, the pots must be full of roots, and your plants will have exhausted all the goodness from the soil. The bulbs, we fear, are not now able to get more sustenance, and in such a condition are not likely to improve. You must get strength before you can get flowers. You may possibly get a weak flower or two from such bulbs, but we fear even this chance is remote, and in the end you will find it best to give more room. It is not necessary to rest young plants that are not strong enough to flower. We have seen them kept growing quietly all the winter. By this means a larger bulb is obtained. Of course you could not do this now, neither is it wise to repot or divide your plants now, growth is nearly finished. If your plants do not show flower in the spring we would certainly divide, not wait till July, as then you will get a longer season of growth for the plants next year. After the plants are in the pots named the less shifting or repotting the better. You can then feed freely to keep the plants vigorous. You must get a strong plant to begin with, and we fear yours are not. When strong there is no difficulty in flowering at a certain season, and with several pots you may have a succession of bloom from June, or earlier. You may say, Why not feed the plants in the pot named? Certainly; but you cannot get a fine bulb growth under such conditions. The plants are not at all free-flowering unless a good growth is made yearly. The winter treatment for flowering plants is to keep them in a temperature of 55° or 60° during winter, giving just enough water to keep the leaves green, giving more warmth in spring, and then thoroughly damping the plants twice daily. Red spider is troublesome in dry houses or if the plants are grown near hot-water pipes. After flowering, feed freely to build up new growth and give ample supplies of water till growth is finished.—Ed.

#### SHORT NOTES.—STOVE & GREENHOUSE.

**Nerine Meadowbanki.**—If not the most striking of this beautiful genus, this is indeed a very attractive one for the brilliant colour. A most brilliant shade of scarlet is quite unique even among the many good things in this family. In a setting of Maiden-hair Fern a mass of its flowers may be tolerated, otherwise when alone it is too dazzling.

**Pancretium canariense.**—This very neat and elegant species is now in flower at Kew, and is represented by a scape 1½ feet high, with the leaves just issuing from the bulb. The blossoms are very compact, the segments scarcely more than 2 inches in width, these with the short, well-expanded cup, which is about 1½ inches across, being pure white. The umbel contained some six or eight buds, which will keep up a succession of blossoms for some time.

**Propagating Gardenias.**—The following plan of propagating Gardenias I have found to answer: I take some twenty cuttings of half-ripened shoots and put them into a large pickle bottle filled with water, and stand them in the stove house. In about a fortnight they begin to make roots. When the bottle is filled by the small roots I then pot them up and repot as necessary. I find that I get better and stronger blooming plants than by making cuttings and putting them into a propagating case.—M.

**Funkia subcordata grandiflora.**—It is not in the open-air garden alone that this is useful or even desirable. Indeed, as a pot plant it has many claims, though more especially where fragrant flowers are admired and where little heat is at command. A fine tuft in a 10-inch pot that has become established will produce several flower-stems and a large number of blossoms. These latter are pure white, fragrant and of considerable length. In quite a cool greenhouse the plant will remain in flower for weeks in succession.

**Rhipsalis Houletii.**—This distinct and curious Brazilian species is now flowering in the large succulent house at Kew. The plants are

about 2 feet high with flattish pendulous branches, the latter deeply serrated. The curious part is that the small yellowish blossoms are produced in considerable quantity along the sides of the toothed divisions. Though not showy, the plant is interesting for the reason noted. The plant may be grown in the same way as Epiphyllums and the like.

## FLOWER GARDEN.

### SOME LATE MICHAELMAS DAISIES.

SOME Michaelmas Daisies are habitually so late that they hardly reach flowering here in ordinary seasons, and others are destroyed by wet and severe frost alternating before they are half over. I heard to-day that there have been 10° of frost in the Lowlands of Scotland, and that the varieties of *Aster cordifolius* have been destroyed past hope before a flower had opened. We are not so badly off as that, for *A. turbidellus* is in flower, and this is my test plant of a Michaelmas Daisy season, being the latest to which I give a place in my borders with any hope of its becoming ornamental. Many other species of *Aster* have early flowering and late flowering varieties, as well as good and bad; for example, the type of *Aster puniceus* is not only coarse and unmeritable, but very early, being over by the end of August, but it has a variety of less spreading and taller habit, which, I think, was called *pulcherrimus* at the Chiswick conference, and seems to be the same as that described on page 313 as *A. p. grandiflorus*—a better name for it, as these superlative surnames leave no room for improvement, a quality which ought to be the object of all gardeners. It is, however, distinct and showy and worth its room, but it seldom begins to flower here till the middle of September.

There are few classes of hardy plants which depend more on the conditions under which they are grown than Michaelmas Daisies. In favourable soils and surroundings a second or third-rate kind will attract more admiration than the best, if badly managed, and there are two common causes of mismanagement: either the stalks are tied together in a close bundle, or the roots have become so unhealthy by the collection of a woolly mass of dead stalks at the base of the plants that they wither up prematurely from starvation. Some kinds are especially liable to this failure. *Arcturus*, *Archer-Hind*, *cordifolius* all grow from a small base without spreading their shoots, and if left alone for more than two or three years become shabby. But running kinds of *Aster* are hateful. I had one (an early kind) with white flowers, commonly known as *niveus*, but I believe it belonged to *Tradescanti*, which ran about so wildly that it has given me some trouble to get rid of. Perhaps the best habit is to spread closely and moderately, so that the stems have room to ascend without great crowding, and that the clumps can be conveniently lessened. *A. Novæ-Angliæ* is one of this kind, so is *Robert Parker*, and varieties known as *Ariadne* and *Purity*.

The colour of *Asters* should be judged in full daylight, or by candle-light if wanted for candle-light ornament. I say this because nearly all of them look so beautiful on a clear evening for about half an hour before sunset that we are apt to be misled with regard to their merits. *Arcturus* and *densus* and two or three unnamed seedlings which I have look tolerably blue by daylight, but towards dusk, on a fine evening, *Archer-Hind*, which is by no means the bluest in sunshine, shows quite a brilliant sky-blue.

Whites are most of them early. There are a few better than *Harpur-Crewe* and *J. N. Wood*, though I have some twenty seedlings which have been under probation for three or four years. Some of these have the versicolour habit of turning purple when they have been out for a few days, and others keep their whiteness to the last. Preference in selecting will be given to those which flower after *Michaelmas*; two or three old kinds, one, I think, of the type of *A. paniculatus*, another the type of *ericoides*, and a very late dwarf, *versicolour nanus*, are all worth keeping. I have a very choice late seedling called *May Crun*, which comes out pure white and passes into pale pink, somewhat in the same manner as the late Mexican Daisy; it is of excellent habit, and I consider it one of the best seedlings I have raised, and as I have distributed it for two or three years it is probably in commerce, but I am afraid it will not do for Scotland. Two other late seedlings, both to be found in catalogues and both raised here, are *Ella*, an improvement in flower on its parent, *Robert Parker*, and *Edith*, a very free, semi-double, large-disked form, with flowers of a pearly lilac. One from a Devonshire garden known as *Coombe-hishacre* has great merits from its excellent habit; it has white flowers with a purple centre, double the size of those of *horizontalis*, which it somewhat resembles, keeping it company in its season of flowering. The *cordifolius* section is now well known; it seeds about very freely, and now and then an improvement comes. I have one of the purest white. The delicate plume-like racemes of some of the best forms of this species are most beautiful, and as it shades where it may escape frost, and has a good blooming season, it supplies flowers often to the end of November. C. WOLLEY-DO

*Edge Hall, Malpas.*

**Campanula patula.**—If "A. D. G." has a friend in Shropshire he ought to be able to obtain seeds of this beautiful annual. I have found it abundantly near Haughmond Abbey at Albrighton, in the neighbourhood of Shrewsbury, and unless, like many other choice flowers, it has fallen a victim to the pernicious system of giving prizes to children "for the best bouquet of daisies" (meaning in effect the extirpation of annuals), it is probably still to be found in the soil and other parts of Shropshire, a county producing, I believe, a greater variety of wild flowers than any other county in England. The "A. D. G." I have never met with any offer of seed, but any nurseryman in Shrewsbury or Lichfield could have little difficulty in procuring it. T. H. ARCHER-HIND, *South Devon.*

**Hemerocallis minor.**—The introduction of the beautiful *Hemerocallis aurantiaca* major led to a good deal of attention being directed towards the Day Lilies of late, and various names thereon have at one time or other appeared in THE GARDEN. Very little, however, has been said concerning *H. minor*, and I have not seen any reference to its most prominent characteristic, viz., the late season of blooming compared with the other members of the genus, for at least a clump of it was bearing a number of blossoms on October 4, and I also saw it about the same time in a similar state in other gardens. The general appearance of the flower is very like that of *H. flava*, which is, however, about the earliest member of the genus to unfold its blossoms, while *H. minor* is much the latest. This last form consists of narrow grass-like leaves, and the branching flower-stem, which reaches a height of about 18 inches, bears several of its comparatively large blossoms of a beautiful clear yellow, tinged slightly on the exterior with green. *H. minor* is also known by the specific name of *graminis*, which well expresses the general appearance of its foliage.—H. P.

## LIGULARIA MACROPHYLLA.

THIS is a very bold hardy perennial, well suited for a position in the border or in the wild garden, where plants with large leaves and of striking appearance may be desirable. The plant here illustrated was photographed in the series of Messrs. R. Veitch and Son, Exeter, where it is flourishing in an ordinary border. Seen from a distance the plant looks as if it belonged to the Cruciferae, but closer inspection reveals the fact that it is a very quaint member of the composite family.

The plant represented in the illustration has flower-spikes each  $4\frac{1}{2}$  feet in height, bearing an elongated panicle of golden yellow flowers. The appearance of the individual flowers is most peculiar and unlike that of most composites, as in this case there are only two or three ray-florets with narrow, ligulate petals, each quite three-quarters of an inch to 1 inch in length and of a bright golden yellow. The disc florets are campanulate and also bright yellow. The leaves which spring from the base are very large, oval in shape, and quite 18 inches long and 10 inches to 12 inches broad, with a slightly undulated, dentate margin. They are smooth and glaucous, with a very broad midrib, most resembling a Cabbage leaf.

Altogether, *Ligularia macrophylla* is a striking plant and well worth a place in the garden.

Elmside, Exeter.

F. W. MEYER.

## THE AUTUMN SNOWFLAKE.

ONE of the most exquisite of our autumn-flowering alpine plants is the autumn Snowflake. Growing in the rock garden it excites almost universal admiration, and elicits many expressions of praise for its beauty. But few seem well acquainted with it, and many who see it appear to think its beauty too fragile to be possessed by a sturdy flower. It has been called a fairy-like flower, and few can question the use of such a term, so ethereal seem its little satin-like drooping bells depending from such slender and unsubstantial-looking stems. Very delicate-looking it is, but its hardiness in many gardens has been amply proved, and one can only hope that a few orders in its favour may draw some attention to this chaste little flower. Although grown also in the border, it is in the rock garden, among the choicest alpine flowers, that *Leucojum autumnale* would find a home. With a carpet of some dwarf creeping plant above its roots it will spear through, its flowers being all the purer from the protection against the splashes caused by heavy rains afforded by the carpeting plant. On an elevated spot among these choice flowers the autumn snowflake is in perfect keeping with its surroundings. It has no showy colours to recommend it to those who love the garish colouring of many flowers. Its beauty consists in its elegance and in the charms of its white flowers, prettily fringed and with a lustrous interior, their beauty heightened by the rosy tinge at the base of the segments and by the chocolate-coloured stems, about 6 inches long, which elevate the flowers above the soil. One of the merits of *L. autumnale* is its lengthened period of bloom. Here this year it came into flower in the beginning of August, and now (just the middle of October), although some of its seeds are nearly ripe, there are yet open flowers on the same clump. It is grown here in sandy soil with good proportion of peat, and thrives well in such a compost, although not increasing rapidly by means of offsets. It ripens seed annually, and by sowing this as soon as ripe, flowering bulbs are soon produced. Self-sown plants are sometimes seen, and one hopes that some day a distinct break may be found which may originate some well-marked varieties. *L. autumnale* is its autumnalis of Salisbury, and is found from Portugal and Morocco to the Ionian Islands. It was introduced in 1629. I prefer planting in pots, but with care it may be removed when in

flower. It is usually after the flowering period that the slender grassy leaves are produced. The variety *pulchellum*, mentioned by Mr. J. G. Baker in the "Handbook of the Amaryllidaceae," I have never seen. The flowers of this are larger and the leaves are produced with the flowers.

Cursethorn, Dumfries.

S. ARNOTT.

**Lilium candidum variegatum.**—Variegated varieties of many plants are by no means improvements on the typical forms in any way, but the leaf markings in this case are very pretty during the autumn and winter. The foliage is of the same shape as that of *L. candidum*, the margin of the leaves having a broad band of yellow running the entire length. At first sight it looks a good deal like the yellow variegated Funkia. The flowers are not quite so good as those of the type, but are produced abundantly enough to make it worth growing on this account, while the foliage serves to brighten up the border in winter.

The mixing craze is carried to great lengths and often with very bad effect in present-day



*Ligularia macrophylla* in Messrs. Veitch's nursery at Exeter. From a photograph sent by Mr. F. W. Meyer.

bedding. A charming collection of the old-fashioned scented-leaved Geraniums to be seen recently in one of the beds in Hyde Park had, planted among it, a few weedy Gaillardias and Celosias that were anything but helpful. Certainly there were no flowers to speak of on the Geraniums, and neither were any wanted, as the variety of form and colour in the leafage was sufficiently attractive in itself, and would have been restful to the eye had there been no attempt to brighten it by mixing with it flowers of garish colours and incongruous forms.—J. C. T.

**Calceolaria amplexicaulis.**—This fine *Calceolaria* is so commonly grown as an annual from cuttings and employed in masses or mixed with other plants, that its capacity to bloom freely when grown as a bush is hardly understood. Mr. Price, of Egham, grows it as such in pots, wintering the plants in a cool house, cutting back

in the spring, and obtaining free growth again and then plunging the plants in beds outdoors in the summer, where, standing individually and flowering profusely at from 3 feet to 4 feet in height, they are very attractive. It is one of the admirable properties of this excellent variety that old plants bloom very freely.—A. D.

## NEW DAHLIAS.

THE note in THE GARDEN (p. 302) by J. Burrell does not prove to me that my comments as to awarding certificates were wrong. Last year nine varieties gained the coveted stamp of merit, but out of that number I have failed to observe five in the exhibition stands of this season. I should not, perhaps, say failed, because here and there I observed three of them exhibited. This on one occasion, however, is not enough. Improved sorts are noted generally—to wit, Charles Woodbridge and Starfish. Having grown at least eight of last year's certificated varieties, I fail to see in what way, for instance, Mrs. Leopold

Seymour is an improvement upon an older kind named Mrs. Barnes, and what there is in Iona and Mrs. Kingsley Foster to prefer to sorts of similar tints, Frances Humphries and Harmony. Mrs. Gordon Sloane, again, is voted by most people a dull and poor class flower. Now this season the number of certificated kinds in the Cactus type has reached nineteen; there may have been more, but these I have seen. Whilst admitting that wonderful strides have been made with this popular class of Dahlia, it is a little too much for one to think that these are all improvements, considering the excellent sorts we already have. If the number of certificates is doubled every year, where shall we stop?

One could also desire a better system of granting certificates than that which obtains at present. The blossoms are judged, but there is no means of knowing the habit of the plant; whether it throws up its flowers well, a matter quite as important to most people as the flower itself, because, after all, it is but a limited number who cultivate Cactus Dahlias for exhibition. I know, in the case of several varieties which will not throw out their blooms from the leaves, that they

may be made to do so by manipulating the growths. The general cultivator, however, does not want to bother about such a matter, and those (by far the greater number) who esteem the Dahlia in the garden rightly consider such sorts worthless.

The trials of varieties of popular flowers like that lately carried out at Chiswick with early Chrysanthemums are most useful and instructive. If Cactus Dahlias could be included in the list, much good would follow and a number of disappointments prevented. S.

**Campanula isophylla and Convolvulus Sabatius** are two plants peculiar to the Capo di Noli (the Vada Sabatia of the Romans) and its immediate neighbourhood. I remember observing plants of the *Campanula* when collecting the

Convolvulus at the end of April. The Campanula, of course, does not flower till much later in the summer. In its wild state the lilac-coloured form is, I believe, much the commoner. A correspondent also asks about Campanula patula. I have found this growing wild on the banks of the Wye, between Monmouth and Chepstow, and presumably it seeds there.—SHERBORNE.

— This handsome trailing plant is inquired about in the last issue of THE GARDEN. The true plant, though existing, is certainly extremely rare. Many hardy plant growers say they have the true plant, but I find invariably that the most they have is the name. What appear to be in circulation are but seedling forms of this fine species, that vary considerably and are generally greatly inferior to the original plant. I have during the present year twice seen the true *C. isophylla*, which I thought I possessed myself, only to find my mistake as the plant developed its leaves and flowers. Frequently *C. fragilis* is substituted for it, but this is not a trailing Campanula in the same sense as *C. isophylla*, and, indeed, from a decorative point of view it is much inferior. The plant does exist no doubt in many old gardens, and it is possible that inquiries concerning it may bring it more generally into cultivation.—E. J.

#### THE YELLOW-FLOWERED PEONY.

THE genus *Peonia*, rich in herbaceous species, did not until lately exhibit either in gardens or in herbariums a single woody species except the Montan Peony, a remarkably fine kind, it is true, and better known under its obviously exaggerated specific title of *P. arborea*, or Tree Peony. Ten years ago a second woody species was introduced by the Museum of Natural History at Paris, to which seeds of it had been sent by M. l'Abbé Delavay, missionary at Yunnan, well known for the great number of fine plants which he has contributed to horticulture in France. The seed-packet was labelled "Seed of an alpine plant gathered on the Ché-Té-Hotzé above Ta-pin-tzé, October 15, 1886." It contained twenty-six seeds of mediocre appearance, which were sown immediately after they arrived, in the early part of the year 1887, and produced only three plants, which made their appearance on May 28, 1888. These plants commenced to flower in the beginning of June, 1891, which, it is needless to say, interested us very much. In the following year they flowered again, and on this occasion the plant was exhibited by Professor Max Cornu at the meeting of the Société Nationale d'Horticulture, held on June 9, 1892, and it was again exhibited at the meeting of the same society held on May 25, 1893. At that time the plants produced only very few flowers, and continued to do so up to the present year, when a specimen which had been grafted and grown in a pot bore eleven flowers all at the same time. This specimen was very handsome, and its abundant bloom appeared to us to be the result of the grafting, as the other plants on their own roots, although vigorous in growth and of fine appearance, produced only one or two flower-buds each this year, and even these did not come into bloom. This new species has been named *Peonia lutea* by Franchet, and is not to be confounded with the Caucasian species (*P. Wittmanniana*), which also has (pale) yellow flowers, but is an herbaceous kind.

The prominent characteristics which at first sight clearly distinguish *P. lutea* from *P. Moutan* are (besides the yellow colour of the flowers of the first-named species) an appreciably dwarfer habit of growth, leaves light green instead of dark green, larger, and with more numerous and much more pointed lobes; secondary petioles winged instead of being

channelled, and the plants come into bloom from ten to fifteen days later, at the same time as *P. albiflora* commences to flower. The plant, which we had under notice this year, showed its first flower on May 28. It was in full bloom on June 1 and had gone out of flower on June 12.

We have not yet sufficiently ascertained the constitution of this plant so as to enable us to state whether it is hardy or not in the climate of Paris. Up to the present, on account of the small number of specimens which we possess and the doubt which we entertain of its hardiness, we have not ventured to risk any of them unprotected in the open air in winter. One plant which we put out in the open ground last year passed the winter in safety under a bell-glass, and has sent up several suckers.

This question of hardiness, however, seems to us rather of secondary importance. However interesting and handsome the typical plant may be, it is especially valuable (as Professor Cornu pointed out when exhibiting it) for the sake of the hybrid varieties which may be raised from it. As it flowers later than *P. Moutan*, it will be necessary, in order to obtain pollen at the proper time, to force the flowers into bloom a fortnight earlier, and our skilful hybridisers will have no difficulty in doing this.

The few shoots of *P. lutea* which, up to the present, we have been able to utilise for grafting have done well on *P. corallina* (Retz) as a stock, and it does not appear doubtful that other stocks which are commonly employed in the propagation of Peonies will answer equally well. We are convinced that grafted specimens of this plant flower far more freely than those raised directly from seed. A siliceous soil appears to suit this plant especially well.—L. HENRY, in *Le Jardin*.

#### FLOWER GARDEN NOTES.

THIS is a busy time in all those gardens where the dual system of bedding is still carried out. The frosts in the early part of the week commencing October 3 made a clean sweep of all tender plants entailing the work of removal, preparation of beds and replanting as soon as possible. Besides plants raised from seed, as Wallflowers, *Alyssotis*, *Silene*, &c., Daffodils, Tufted Pansies, and Polyanthuses are largely included in what is commonly known as spring bedding, a planting of Daffodil bulbs in beds previously filled with dwarfer things being an arrangement held in considerable favour and somewhat largely adopted. I think it is rather a patchy style of gardening, although there can be no doubt as to the fine display of colour secured or the pleasing contrast afforded. Personally, in all cases, where additions are made to the stock of Daffodils, they are planted on grass in the pleasure grounds as a foreground to clumps of evergreens by the sides of walks, or places of a similar nature. They may, however, be also utilised to great advantage for filling in large beds that are mainly planted with herbaceous things of large size. This is specially applicable in the case of Peonies, especially those varieties whose foliage in a young state is very brilliant. The contrast between this and the yellow Daffodils is very fine. Beds too, that are made up for the benefit of Peonies will grow Daffodils to perfection. The above is alike a contrast that is effective and a combination that is natural. It is something that might be employed in any part of the garden, or that would look quite at home in the centre of a wood. The note on this association leads to the suggestion that planting at this season of the year might well take a more permanent form than the insertion of things that have to be uprooted in spring. The flower gardener of to-day is likely to have a stock of hardy plants on hand that would cover the beds through the winter, come into flower in succession, and last, in

the majority of cases, well through the summer. In cases where the plants are not already to hand provision can be made to furnish them by another spring, by the various means of propagating most calculated to give the best results. I have just finished planting up beds with Carnations, Pinks, Tufted Pansies and Pyrethrums. The herbaceous *Lobelia*s will be divided as soon as they are ready, and later, Phloxes, Pentstemon and Antirrhinums, that have been obtained from cuttings or seed, will go into positions reserved for them. Reverting back to the Peonies, I should be glad to know if the young foliage can claim immunity from the attack of rabbits. Mr Barr tells me the occasional rabbits that get into the Long Ditton nurseries have not been known to touch it. An occasional visitor, however, different from where they are to be found in quantity, and I should like to be fairly certain at the point before attempting to naturalise. The few things rabbits will not touch. I can across a batch of seedling Foxgloves the other day that had been closely nibbled. I have never known them touch Daffodils.

STARWORTS.—Two of the older Starworts, just now about at their best and holding their own well among the newer sorts as very charming in cut state, are Robert Parker and Tradescant. It is almost impossible to find anything better than the former in the matter of colour—a beautiful soft lavender-blue—that shows to great advantage against dark or gilded vases. I noticed a mass of it the other day inside a window in a large vase: the sun was shining brightly upon it and the colour struck me as exceptionally fine. The individual flowers of Tradescanti are very small, but the manner and profusion in which they are produced make the variety very useful. Shoo cut the entire length and tastefully arranged in pots of damp sand last a long time in the house and are very nice for church decoration arranged with feathery Palms, Bamboos, or things of a similar nature. The value of the Starworts, at any rate, the majority of them in a cut state is considerably enhanced, from the fact that they require no foliage. A stem or two of Asparagus well loaded with berries is very well as a change, occasionally with the different shades of blue at lavender, but they look equally well alone. Naturally the varieties of dense habit—of which *A. Amellus* and its forms, *A. acris* and *A. dumosus* may be taken as types—are not so acceptable in a cut state.

CARNATIONS.—I have decided to defer the planting of these until early spring. They are going out on the same border, which means that the work once commenced should be carried through, and an examination of the layers has shown that whilst some are splendidly rooted others are not so good, and would be all the better if allowed to remain longer on the parent plant. The border destined for their receipt will get a heavy dressing of peat moss manure and be turned up deeply, leaving it in the rough so that given a visitation of frost it will be a grand trim for planting in February, or early March, as the weather will permit. I have picked out some of the strongest looking layers this week, and potted up batches of Haye's Scarlet Ketton Rose, Lady Nina Balfour, White Clove, The Pasha, Miss Audrey Campbell, and Uria Pike. These all do well in pots, and are sufficiently varied in colour alike to give a display in the greenhouse and to cut for button-holes. Lady Nina Balfour takes the place of Countess of Paris; the latter for the last three seasons seemed to have lost its vigour, its roots slowly and differently, and will not come away kindly.

CARPET PLANTS.—Plants of very dwarf habit enter largely into many flower garden arrangements, and no one can deny that things of tall growth show to the best advantage when there is a little space between the clumps, and that space is clothed with greenery instead of showing only the bare earth. It is always advisable, however, before carpeting in this way, to make sure that the necessary time can be spared for keeping the same clean and tidy. Such things as the alpine

## SHORT NOTES.—FLOWER.

**Gynerium argenteum.**—The greenish tinge of youth as seen in the lofty plumes of the Pampas Grass is now being replaced by the silvery hue from which the plant derives its specific name. The largest tufts are very pleasing where both shades are to be seen at the same time. On the grass in the Royal Gardens, Kew, are many fine tufts in full beauty at the present time.

**Canna Paul Bert.**—This fine deep scarlet-flowered *Canna* has stood out prominently among others at Kew this autumn. It is handsome alike in foliage and flower, the leaves being large and of a deep bronze colour. Well-grown *Cannas* are a great boon in the flower garden if only from their imposing habit of growth, and when to this is added a profusion of handsome flowers the effect is very fine.—J. C. T.

**Kniphofia nobilis.**—This handsome Torch Lily is still pushing forth its fine heads of bloom, so large indeed and so massive in general appearance as to be almost suggestive of its distinctive name. But the true character of such plants does not appear until

distubbing are required to produce large, symmetrical, deep blooms with perfect centres. Were this not done all the flowers would come open-eyed. If I wanted a good supply of white Dahlias in my garden, I should depend upon pompon *George Brinckmann*, a variety which is rather large as a pompon, but produces charming flowers in great abundance.—R. D.

## KITCHEN GARDEN.

## OUTDOOR TOMATOES.

To grow Tomatoes successfully out of doors the seed must be sown by the middle of January and placed in a nice warm propagating pit or frame. As soon as the plants are fit to handle they should be potted off singly into 3-inch pots and put into a close frame for a few days. The compost should not be rich, but consist of good fresh leaf-mould one part, fibrous loam two parts, and a little sharp sand. I find the plants grow much better when planted out and potted in this way than when a richer compost is used. The chief thing to aim at is to keep the plants as sturdy as possible, short-jointed plants fruiting much quicker when planted out than those that have been allowed to become drawn. By the first week in April they should be nice plants and need more air on bright days, as this will assist very much in hardening them ready for planting outside, which should be done about the end of April or the first week in May, taking care to cover them at night till they are safe from frosts. The sorts which I find do best out of doors are *Chiswick Red*, *Polegate*, *Carter's Early*, *Viceroy*, and a seedling the result of a cross between the *Old Red* and *Polegate*. *Chiswick Red* is a splendid cropper outside.

There is still one more feature in outside culture, and that is getting the fruit to ripen after it is grown. How often do we hear people say they can grow plenty of Tomatoes outside, but they cannot get them to ripen. If they will cover the fruit at night from about the middle of September and keep off the rain and dews, they will find that the greater part of the fruit will ripen well outside. Not only is the fruit

much better when ripened on the plants, but a good portion of the crop is often lost through being picked green.

The enclosed photograph was taken on September 27, and most of the fruit has now (October 12) ripened well outside.—W. J. EMERSON, *The Gardens, Amphil Hill House, Beds.*

— This has been one of the best years for outdoor Tomatoes that I remember, and if it had not been marred by cold, wet, stormy weather during August and the early part of September, I should have ripened the largest percentage of a heavy crop. Owing to the latter part of September and the early days of October proving fine and dry, a deal of fruit has been forwarded sufficiently to get it into a condition when a few days under glass will ripen it off, and certainly good wall-grown Tomatoes are far superior to anything in the way of imported fruit. Anyone growing this crop in the

boxes, Sedums in variety, Camomile, *Ajuga reptans*, *Aubrietias*, and the like, are planted to and for several seasons rather than to be treated as annuals, and such undisturbed ground will produce weeds in considerable profusion in positions where it is not possible to use the hoe, but hand-weeding is the only means to be employed to secure eradication. Given, however, the necessary amount of labour the above can be used both in large herbaceous beds and borders, and also on beds sparingly planted with bulbs, and is present is a good time to set about the work; it is much better than letting it stay over until the spring, when, as a rule, there is little time to do more than is absolutely necessary. Tufted *Lisias* can also be largely used, and may be planted now if well rooted; if not they are better left until spring.

E. BURRELL.

Claremont.

**Hardiness of Carnations.**—Mr. Burrell writes undoubtedly in good faith when he asserts that the hardiness of Carnations is but a matter of well-rooted plants. It may surprise your correspondent to know that, although I live within ten miles of Claremont, I cannot keep Carnations in health through the year in the open ground, no matter how much care I may take in preparing the ground and planting strong, well-rooted layers early in autumn. Carnations are hardy or otherwise according to local conditions, and every would-be grower of them must adopt a local system that will assure him against the effects of damp and disease. Left in the open ground all the winter, Carnations with me in seven years out of ten fall victims to the fog demon. Those who have hitherto failed should follow the hints given by Mr. Crawford and "E. J.," and they may rely on securing satisfactory results. Last season I was late in layering and many of the plants were indifferently rooted. At the end of October I planted them all in frames in light, rather sandy soil, giving one good watering to settle the soil round the roots, but not a drop afterwards. The lights were put on to keep off rain and snow; in foggy weather they were tilted at the sides to allow of a current of air passing through, and were kept off in a time of sharp frost. During the winter they made a quantity of white roots, were planted out in March, and I never saw Carnations make finer growth.—J. C. B.

**Good bedding Fuchsias.**—The use of Fuchsias for flower garden decoration continues to increase, and few plants give more pleasure when well placed. All varieties do not succeed equally well for the purpose, and though there are some notable exceptions, the majority of those which do best belong to the section with red sepals and plum coloured corollas, these being hardier generally than most of the lighter coloured forms. I noted a week or two back in Hyde Park some excellent varieties, old and new, mostly of the form of big pyramid-shaped plants, and flowering freely. One of the most noteworthy was the old Tower of London, which was planted in combination with *Coreopsis lanceolata*, this being so in good condition, tall, and finely flowered. Scarcely was it blooming freely, the flowers being of globular form, suggesting the old and very pretty *F. Riccartoni* as one of its parents. Another good variety of globular shape was *F. Prinka*, the colour of this being almost self red. *Mrs. Rundell* is a very distinct and charming Fuchsia with flesh-coloured sepals and vermilion corolla, the flowers long, and much like those of the better-known *Mrs. Marshall* in form and size. *F. Mme. Cornelissen* was also exceptionally good, and it remains still the best of all Fuchsias with white corollas. The fine plants of this were badly carpeted with mixed colors, the various colours of which spoiled the effect of what should have been an attractive white. A green carpet would have been far more effective than this indiscriminate mixture of Asters in many colours and shades, some of them very pretty indeed. To the above good outdoor varieties may be added the fine old *F. fulgens*, a bed of which seen at Kew was uncommon.—J. C. T.



Tomatoes in the open air at Amphil Hill House, Beds. From a photograph sent by Mr. W. J. Emerson.

they are some three or four years old, when the towering spikes will reach 8 feet high. For this reason it is well to anticipate its maximum height when planting it.

**Crocus speciosus.**—The flowers of this lovely species have been more than usually abundant this year, particularly when growing in the more grassy spots on banks and the like. Very often the flowers of this and allied subjects that appear in advance of the foliage suffer greatly from pelting rains. The flowers are more durable in the grass than in places fully exposed. Few things are more beautiful in the grass than these, particularly on banks or slopes.

**Dahlia Mont Blanc.**—The proper name of this variety is *Gloire de Lyon*, under which it was sent out from France some years ago, and by which also it is known in Dahlia catalogues and exhibited at Dahlia shows. When caught in its best character it is a fine white self, but not so constant or so fine in quality for exhibition as *John Walker*. Those who grow *Gloire de Lyon* for exhibition allow the plants to carry all the buds until they get one or two or more which are likely to produce fine blossoms, and then thinning out and

open air must, even on the south coast, get the plants as far advanced as possible under glass, and plant out as early in May as possible. I generally plant at the end of April, and cover the plants when frost threatens, for even half the area of early plants will finish off more ripe fruit than double the quantity put out at the end of May, and that they repay good deep culture and rich soil I am quite convinced by the crop. In deeply trenched borders the plants have gone to the top of a 10-foot wall, and are loaded with green fruit to the tips. As regards varieties suited for outdoor culture, I think a sort called Brookes' Freedom has surpassed all others in freedom of cropping, and the fruit is of about the size and shape that find most favour with purchasers. A bright red, round Tomato weighing a quarter of a pound is far more saleable than one double the size.—J. G., Gosport.

**Cabbage sprouts.**—"S. M." (p. 283) is hardly fair to me in saying that I think Cabbage sprouts superior to young Cabbage, as in my note on this subject I simply said that I saw no falling off in the quality of these sprouting hearts. I have not the least hesitation in sending such to table, and, more than that, I get no complaints for so doing; neither are they necessary. Of course, this would not be the case if the land was not well prepared and in good heart to withstand the strain of prolonged cropping, but, given this and a good variety for the purpose, I see no advantage in the destruction of useful beds before their time, and, from the point of garden economy, I consider the advice to do so is wrong. At the same time I have nothing whatever to say against the practice of planting a few rows of spring-sown plants as a supplementary measure or from motives of tidiness.—J. C. T.

**Broccoli Michaelmas White.**—Wherever grown this variety is sure to please owing to its size, colour, and flavour, and coming in nicely between ordinary sowings of Veitch's Autumn Giant and Self-protecting Broccoli. Even if it be sown at the same time as the September batch of the former, it being a somewhat slower grower, will follow it, and as the weather is then cooler it comes on gradually and lasts over a considerable time. One of its characteristics is the pure white heads, in this respect surpassing all other autumn sorts. Market growers would do well to turn their attention to this Broccoli. Hundreds of acres of Autumn Giant and Self-protecting are grown, but good though these be the fine delicate appearance of Michaelmas White would catch the eye of buyers, and secure for it a ready sale.—C.

**The Rochford as a market Cucumber.**—Many Cucumbers will do well enough grown in the summer months, but are useless for producing profitable crops during the trying period of December and January. The good old Syon House is still one of the best, its somewhat short fruit being produced on healthy plants even more freely than the much-grown-for-winter sort Telegraph. Lord Kenyon's Favourite is another good winter Cucumber if it can be obtained true, but few nurserymen now catalogue it. A variety, however, that when well grown by gardeners for winter fruiting will be always valued is the Rochford. This is a selection made by the great fruit-growers of that name; it cannot be beaten where profit is a consideration. I was recently talking to a grower for market, who informed me that he grew the Rochford exclusively. He also said many failures in winter Cucumber-growing occur from the plants having too much soil to grow in. Deep beds, or even bulky hillocks of soil get sour before the roots can permeate them, and the plants at once go back. His opinion was fully justified by the grand crops he grew last winter in very small mounds of manure-free soil, half an inch more being added when the roots appeared on the surface.—J. CRAWFORD.

**Notes from Baden-Baden.**—Of the typical *Scabiosa caucasica* a white variety has been

raised. It is a beautiful plant, but lacks robustness, being of rather delicate constitution and also particular as to soil and situation. We have, moreover, a variety of the type which is called elegans or conata, which is a very robust grower, with larger flowers and more imbricated ray petals. This variety I have used for many years in order to obtain new varieties. This year I have been so far successful, and have obtained different forms and a break in colour. A bright deep ultramarine form and a snow-white variety have been raised, the latter a far superior plant to the now common *S. caucasica* alba. *Liatris graminifolia* alba is quite a little gem, the pure white flowers look very cheerful. After great trouble I have succeeded in getting a small supply of *Ramondia Nathalia*, now nearly extinct in its wild habitat. It has larger and deeper coloured flowers than *R. serbica*. *Crocus Cartwrightianus* albus and *C. marathonsis* are very showy pure white autumnal blossoms. Another *Crocus* is very beautiful just now. It is a species new to cultivation, flowers snow-white, with a few faint black stripes, the leaves are glaucous grey, and have no points, but angles.—MAX LECHTLIN, *Baden-Baden*.

#### NOTES ON STRAWBERRIES.

WE have to thank our readers all over the country for so kindly replying to the following questions, and we hope that the notes will prove valuable:

*Will you kindly aid us in throwing some light on Strawberries of best quality for the use of private growers, as market growers have a different standard from that which applies to the private gardener, and favour those kinds that bear carriage, rather than those that are remarkable for flavour and quality? For those who use their own fruit we think that a different standard should be in use.*

1. *What kinds do you consider the best for flavour in your district, i.e., as grown in gardens, not taking into account those grown in the open field for market?*

2. *The best early and late kinds for the open air in your district?*

3. *Which of the newer sorts do you find most worthy of cultivation from a garden point of view?*

4. *The best time to plant so as to secure the best and most regular crops?*

—Royal Sovereign, Vicomtesse Héricart de Thury and President I consider the best either for forcing, cropping or flavour. These are hardy, free bearing and of good quality. Auguste Nicaise and La Grosse Sucrée are both early kinds, of good flavour, good for forcing and free bearing, but they suffer very much in severe winters, not being so hardy as the first-mentioned. A variety called Louis Gauthier gave a few fruits, but the colour I should imagine will be very detrimental to it ever becoming very popular in England. Louis Gauthier with me is a kind of cream and pink, or magenta, as a person once remarked to me. At the time of writing (August 17) I have plenty of the alpine variety, which is most prolific, good in colour and of robust constitution. Though small, it is well worth growing for mixing with other fruits for tarts or jam, or even dessert where variety is required; another advantage is that birds do not trouble it much. There are some kinds I cannot succeed with. They make plenty of growth, but fail to fruit, so have been discarded. Among these are Keens' Seedling, Dr. Hogg, Sir J. Paxton, British Queen and Elton Pine. Several have been discarded owing to poor flavour—Noble, for instance. I give Royal Sovereign the premier place for all purposes as a Strawberry of recent introduction, while older kinds, as President and Vicomtesse Héricart de Thury, still retain their position. The ground

is a strong clay and with deep cultivation suit the Strawberry well. As a rule I plant on ground that has been cropped with early Peas or Potatoes, and give a dressing of burnt ashes on decomposed soil from the rubbish heap, with a addition of lime if they follow Peas. The ground is dug over, but not after Potatoes. I then plant in rows 2 feet apart and 1 foot 9 inches from plant to plant, except alpine varieties, these are a foot each way. They usually stand three and sometimes four years if they remain in good condition. I plant on permanent ground as soon as I can obtain good runners, and generally get a nice crop of fine fruit the first season. In the following spring—April or May—according to weather, give them a good mulching of half rotten manure which keeps the moisture in the ground and also keeps the fruit clean when ripe, as most of the substance is washed out of the manure by the time. When the fruit is gathered, I clear off the runners except those required for planting. Never dig or fork between the plants, only use the Dutch hoe occasionally to loosen the surface. I have had heavy crops for years with this treatment. This is a cold, late district, the atmosphere charged with sulphur, which is most disastrous at times to vegetation.—T. BONNAL *Blom Hall, Leeds*.

—The best Strawberries for flavour in the garden are Lord Suffield and Gunton Park. The best early kinds are Royal Sovereign and Vicomtesse H. de Thury; the best late sorts, Latest All and Elton Pine. The newer sorts most worthy of cultivation in this garden are Gunton Park, Monarch, and Latest of All. The best time to plant so as to secure the best results is early in August from early layered runners from plant grown especially for producing them, these never being allowed to bear fruit.—JOHN CRAWFORD *Coldington Hall, Newark*.

—The best flavoured Strawberry grown here is Sir Joseph Paxton. It is one of the best to be cultivated. Noble is the best early variety I grow. Some of my friends say it is wanting in flavour. I agree with them it is not one of the best, but when grown 3 feet from row to row, well exposed to the sun and gathered before it is too ripe never have any complaints. James Veitch's Waterloo succeed well here as later varieties. The best time to plant Strawberries is as early in August as possible, so as to get the plants well established before winter sets in. At the first signs of frost I give a good dressing of manure but see that the crowns of the plants are not covered. This annual mulching should be given each year as long as the plants are required to bear. I think close planting and digging between the plants are the greatest errors in Strawberry culture. I never plant nearer than 3 feet from row to row and 18 inches in the row. I never dig the ground from the time of planting until the plantation is done away with, which is always soon as the third crop has been gathered. I have adopted the above system now for over twenty years, and, wet and dry seasons alike, never fail to have a crop.—THOS. CANNING, *Aldenhall Park, Bridgworth, Salop*.

—The best flavoured Strawberries here are Keens' Seedling, Sir Joseph Paxton, Royal Sovereign, President, Laxton's Commander, The Countess, and Latest of All. The best early sorts are Keens' Seedling, La Grosse Sucrée, Royal Sovereign, Sir Joseph Paxton; the best late Latest of All and Elton Pine. Of the newer sorts that have done well are Royal Sovereign, Laxton's Commander, and Gunton Park. For planting consider the best time about the first or second week in August if you have good rooted plants ready and the ground has been well sweetened and manured.—T. RANDALL, *Holme Lucy, Hereford*.

—The Strawberries that are most in favour here are Royal Sovereign, Sir Joseph Paxton, and Sir Charles Napier. For an early variety I like Royal Sovereign. Grown side by side with Noble it was quite as early and much better in every way. Latest of All is preferred for a late crop. Of newer varieties tried Royal Sovereign and Latest of All are the best. Competitor crop

all, but the fruit is too soft. I like to plant as on as strong plants can be got at the end of July or beginning of August. Plants layered on all squares of turf are liked much better than those in small pots. I make a new plantation annually, and do not keep the beds more than three years. — Wm. ANDREWS, *Trigothuan, Cornwall*.

— The following Strawberries succeed well here, viz., Royal Sovereign, President, Sir Joseph Paxton, James Veitch, Sir Chas. Napier, Waterloo, Dr. Hogg, Oxonian, Elton Pine, and Latest of All. The following three varieties I have discarded, British Queen, La Grosse Sucrée and Noble. They were not satisfactory. The kinds giving the best flavour are Dr. Hogg, President, Sir Joseph Paxton, Royal Sovereign, and Latest of All. Waterloo by some is greatly admired. The earliest kind I grow is Royal Sovereign; by the time its latest fruits are ripe the earliest fruits of President and Sir Joseph Paxton are ready for use, followed by others. The best late kinds I grow are Latest of All, Oxonian, and Elton Pine. The only new kinds grown here are Royal Sovereign, Latest of All, and Waterloo, which are very satisfactory. The best time to plant for securing a good crop the following season is the latter end of July or as early in August as possible, but in such seasons as the present it was very difficult to secure young plants for July planting. To prolong the Strawberry supply I find it a good plan to plant a south border for the earliest. The second principal beds are planted in the open. The best are planted on a north border. From such planting as I have named the results have been most satisfactory. — W. GLASSEY, *The Gardens, Howbery Park, Hately-on-Thames*.

— The varieties I consider the best for flavour are Vicomtesse Héricart de Thury, Royal Sovereign, President, Gunton Park, and Dr. Hogg. The only other kinds I grow are Laxton's No. 1, Anguste Nicaise, and Oxonian. The best early beds are Laxton's No. 1, Vicomtesse Héricart de Thury, and Royal Sovereign, which ripen in the order named. The best late kinds are Gunton Park and Oxonian, the latter continuing the supply so long as I have found it possible to gather Strawberries of good flavour out of doors. Of the newer kinds the only ones I have found thoroughly satisfactory on this soil are Laxton's No. 1, Royal Sovereign, and Gunton Park. Lord Suffield and Waterloo I found to be of excellent quality, but they did not crop sufficiently well to be retained. I plant the layers about the middle of August, in well-manured and deeply trenched ground. Part of the annual plantings is composed of forced plants. These are put out in June and always afford heavy crops the following season. Forced plants of Vicomtesse planted out in May in most seasons afford a late autumn crop, but my experience is that outdoor Strawberries give no flavour after August, in the north at any rate. — J. TENNINGTON, *Ripley Castle Gardens, Yorks*.

— The Strawberries I find to do best with me on this soil, which is a stiff clay, are Vicomtesse Héricart de Thury, Sir Joseph Paxton, Gunton Park, Royal Sovereign, Sir Charles Napier, and Lord Napier. The best early kinds are Vicomtesse Héricart de Thury and Sir Joseph Paxton; the best late, Sir Charles and Lord Napier. Of the new kinds, Royal Sovereign is the best, Noble lacking flavour. The best time to plant greatly depends on the condition of plant and soil. If the plants have been layered early to pots, and the soil well prepared and in good condition, planting may be done in August with very good results. I prefer to delay planting till March. I take the layers off in August and plant them thickly on a good piece of ground, forming a kind of nursery bed. Then in March I pick out the strongest and best and transplant to the permanent bed. I agree with destroying the beds after three years' fruiting. — A. CANNON, *Abouley, Edinburgh*.

— For earliest kinds I find Vicomtesse Héricart de Thury still good. Although not a large kind, it is reliable in every way. Royal

Sovereign is a most useful Strawberry, of large size, good flavour, an abundant bearer, and of good colour when well exposed to the sun. It is rather soft for travelling long distances, but for home consumption first rate. This is the best of the new kinds I have grown. Of the second earlies, Sir J. Paxton is a reliable kind and will travel well. John Ruskin is a most abundant bearer and of fair quality. Of late kinds, Frogmore Late Pine is well known. Jubilee is a first-rate kind, most abundant cropper, and of good quality. It is a valuable kind and everyone should give it a trial. Latest of All is a good variety. Countess is the finest flavoured Strawberry I know; the fruit, handsome, of cockscomb shape, and splendid colour, is freely produced. The following I have found wanting in various respects, although some of them I still retain for further trial: King of the Earlies is richly flavoured, but too small; Pauline worthless; Noble large, but of poor flavour and soft; La Grosse Sucrée of poor flavour; Anguste Nicaise large, poor flavour and very soft; Lord Suffield and Gunton Park have very large, soft fruit of poor flavour; Sensation very large fruit of the poorest quality; Waterloo too delicate in constitution; Loxford Hall Seedling is of first-rate flavour, but too uncertain for general use. The best of the newer kinds grown here are Royal Sovereign, Latest of All, and Jubilee. The best time for forming new plantations is, in my opinion, August, provided the weather is suitable. — THOMAS ARNOLD, *Cirencester House, Gloucester*.

— No hard and fast rule can be laid down, so far as my soil is concerned, on the best way of growing Strawberries. It is simply a matter of so treating each variety that it is grown in such a manner as will lead to the best results, for whilst one will do well as an annual and degenerates after the first year, another gives altogether better crops, greater in bulk and equally good in quality, in the second and third years. I am rather chary of trying new varieties, several that were strongly recommended having signally failed. The following are very reliable: Of Black Prince, a few grown on a south border connect the season between indoor and outdoor fruit; trusses are thinned and bloom receives protection; annual treatment from early runners layered in turf. Vicomtesse H. de Thury is my heaviest cropper. It is grown on the three years' system, trusses and bloom are thinned for dessert; for general kitchen use, however, and preserving, for which latter purpose it is one of the best, no thinning is required. La Grosse Sucrée is still one of the most reliable varieties, of close and compact habit, and may be planted thickly. Annual treatment being indispensable, the plant is worthless after the first year. Royal Sovereign grows very strongly and throws good fruit, but there is a tendency to mildew. President is the best mid-season variety, and is grown on the three years' system either from rooted layers or old forced stuff, the latter preferably; the same latter cultural note should have been made of V. H. de Thury. Of late sorts I have tried Unser Fritz, Frogmore and Filbert Pines, Hélène Gloede, Loxford Hall, and Waterloo, and the last-named is decidedly the best; annual treatment giving the best results. Filbert Pine is a good late variety, requiring good soil and liberal treatment. Noble and Sir J. Paxton were formerly grown and proved exceptionally heavy croppers, doing well under the three years' treatment, but I have discarded them, the first-named being useless for dessert, and Paxton not so good as President, that is if one gets the latter true. There are two Presidents in the field, the one a high-class Strawberry, the other very poor indeed. Neither British Queen nor Dr. Hogg are at all satisfactory. — E. BURKELL, *Claremont, Esher, Surrey*.

— The best flavoured early Strawberry is without doubt Héricart de Thury, and besides giving good crops the fruits are usually of nice table size. This is hard run for earliness by Royal Sovereign, a variety that has become very popular and is now universally grown. Following this come The

Countess and Edouard Lefort, both giving high flavour and neat, excellent fruits. Gunton Park and Lord Suffield are both fine flavoured mid-season varieties, and for late use the best are Latest of All and Veitch's Perfection, a variety that furnishes the flavour of British Queen with the deep colour and lateness of Waterloo. Here are eight varieties that apart from other qualities give flavour in the highest degree as found in Strawberries, and all are on the average good growers. Too many persons associate acidity with flavour; that is a mistake. British Queen, the best flavoured of all the old varieties, is but slightly acid, whilst its aromatic flavour is pre-eminent. All who would test flavour in any new variety should have British Queen as a test fruit. So far are answered the three first queries found in the circular issued from the office. Possibly from other quarters will come other results, but the conditions imposed on replies to these queries necessarily limit the range of selection of varieties, and so far that is a good thing, as by excluding the large, soft, or flavourless varieties more than two-thirds of the commonly known ones are avoided. With respect to question four, there can be no doubt whatever that Strawberry plants cannot be put out where to fruit too soon after they have become well-rooted runners. If that work can be done in August, either from pots or hand-layered plants, lifted with balls of soil, and replanted in deeply-worked and well-manured ground at once, then not only does rooting follow rapidly and the soil be widely gripped, but strong crowns also are produced; as only from stout, firm crowns can such bloom be produced in the spring as shall evolve fine and abundant fruits. Where ground cannot be spared in August, the plants lifted from the old beds should be put into a nursery ground for a month and be transplanted where to fruit later, but the sooner thus planted the more stout and firm is the leafage, the earlier does it mature, and the more solid the crowns. For first early uses the plan of putting out the young plants on to warm borders in August at 12 inches apart is a good one, as double the crop on a given area is thus obtained the first year, and then some other crop may follow so soon as the plants are cleared off. In that way the border can produce two crops in the year instead of one only if Strawberries stand for three years. — A. DEAN, *Kingston-on-Thames*.

— The crop this season has been very poor with me. My favourite sorts for flavour and cropping are John Ruskin, Noble, Royal Sovereign, President, Sir Charles Napier and Latest of All. Noble is a grand fruit, but rather deficient in flavour. Napier is my favourite, both for general crop and forcing, it also being one of the best for travelling. I have not tried many of the new varieties, but Royal Sovereign and Latest of All are my favourites amongst those I have tried. In making new plantations, I like to get the runners rooted in small pots for planting in their permanent quarters as early as possible to insure good returns the following season. After fruiting three years I destroy the plants. — Wm. SANGWIN, *Trelissick, Truro*.

— The varieties I consider best in flavour are British Queen, Royal Sovereign, King of the Earlies, Gunton Park, President, and Vicomtesse Héricart de Thury. I find the following varieties best for early use: King of the Earlies, Noble, President and Vicomtesse Héricart de Thury; and for late use: Latest of All, Veitch's Perfection and Elton Pine. I find the following new varieties best worth growing: Royal Sovereign, Gunton Park, Sensation and Monarch. The best time to plant Strawberries here is from September 20 to 30—I mean runners that were taken off and potted in August, and put close together in a shady place till rooted. — Wm. MOORE, *Albion Hall, Leeds*.

— I find the best kinds here are Vicomtesse and Keens' Seedling for early work and preserving, while for dessert I find Royal Sovereign, Sir Joseph Paxton, Dr. Hogg, and British Queen the best, coming in the order named, with Oxonian for very late. Vicomtesse, Keens' Seedling, La

Grosse Sucrée, and Royal Sovereign are the best early kinds, with Dr. Hogg, British Queen, Oxonian, and Latest of All for late use. Royal Sovereign is the best new variety. I plant good strong-rooted plants at the end of August and get a fair crop of extra-sized fruit the following season.—F. HARRIS, *Eastnor Castle*.

—The Strawberries grown here are principally old kinds, and I have never known them fail to produce a good crop. The kinds I find bear carriage best are Noble, James Veitch, President, Gunton Park, Royal Sovereign, and Dr. Hogg. The following are the kinds I consider best for flavour in this district: Royal Sovereign, Scarlet Queen, Gunton Park, Vicomtesse H. de Thury, and Dr. Hogg. The best early and late kinds that I find do best here are Royal Sovereign, Scarlet Queen, Noble, Vicomtesse H. de Thury, James Veitch, Auguste Nicaise, La Grosse Sucrée, President, Sir J. Paxton, and Dr. Hogg. Of the few new kinds I have grown I find Royal Sovereign is one of the best. Scarlet Queen and Gunton Park also do well here. The best time to plant so as to secure the best and most regular crops is, I consider, as early as possible. I always get the runners into the pots as soon as they are large enough, and as soon as they are well rooted I have them planted out into well-manured ground. By planting early the plants have time to make good crowns before the cold weather sets in, and in the spring are ready to make a good strong start. I only allow a bed to remain two years, as I find the plants do no good after that time.—WILLIAM CONWAY, *The Gardens, Abberley Hall, Stourport*.

—The Strawberries I find do best in this garden are Royal Sovereign, Waterloo, Vicomtesse Héricart de Thury, James Veitch and Latest of All. Royal Sovereign is by far the best Strawberry grown for all purposes: it is splendid for forcing and does well in the open. James Veitch is a capital Strawberry as a second early, and it withstands the drought well. Vicomtesse is a grand old sort always to be depended on, and where Strawberries are in demand for preserving there is nothing better. I always layer my Strawberries into small pots, get them on early and plant out after early Peas or Potatoes: I thus get a good crop the following year. Another good plan which I have adopted for years, and which never fails to give good results, is to put out the best of the plants that have been forced. Stand the plants in a cool frame after they leave the forcing-house and look after them well, and when the ground is cleared of other crops plant them out and well water. The result will be a full crop the next year.—T. B. FIELD, *Ashwellthorpe Hall, Norfolk*.

—I have been trying Royal Sovereign this year, and am very well satisfied with it. It is a good bearer, fruit of good colour, large, and earlier than President. I am planting a larger bed of it this year. I have thrown away Noble, the flavour not being good enough. President I still find the best Strawberry for all requirements when in season, and follow up with Elton Pine when there is only room for three sorts. I consider these the best. Dr. Hogg I like very much. Black Prince, Hélène Gloede, James Veitch, Sir Harry, Sir Jos. Paxton and Vicomtesse Héricart de Thury I have discarded.—F. OLDFIELD, *Broomfield Hall, Derby*.

—Of the many Strawberries that I grow I prefer Royal Sovereign. I layered it into small pots last autumn and planted it out in the spring of the year, when it yielded a fine crop of large, fine-coloured fruit. Vicomtesse Héricart de Thury is one of our best flavoured and always carries a good crop. Keens' Seedling does well with me and is a great favourite. President also does well and is much liked. I consider Royal Sovereign the best early and the best new variety on our soil.—J. HUNTER, *Lambton Castle*.

—I am no believer in a number of kinds of Strawberries any more than I am in a number of sorts of Potatoes. About three kinds of either I find sufficient for all purposes. Without being over hasty in putting Sir Joseph Paxton in the

background for general purposes, I think I must give the place of honour to Royal Sovereign, as it has done exceedingly well with me these two seasons and is in every way good. Sir Joseph Paxton I grow largely for main crop as the fruit travels well and is of good shape and colour, the plant being prolific and of good constitution. Vicomtesse H. de Thury I still grow largely, it being a good early variety and very prolific. Frogmore late Pine is a good late kind, and where the season needs extending will always repay the attention bestowed upon it.—C. WARDEN, *Clarendon Park, Salisbury*.

—I regard Sir J. Paxton as one of the very best flavoured Strawberries suitable for garden culture. It is also a grand cropper, and for appearance very hard to beat. Royal Sovereign, La Grosse Sucrée, Countess, Waterloo, and Leader, added to the first-named, are six varieties not easily beaten when flavour, appearance, and cropping qualities are taken into account. As a very early variety we cannot yet do without Laxton's No. 1, for, although the flavour is not quite first-rate, gardeners must produce early Strawberries in the open air. Royal Sovereign is a fine variety to succeed it. Frogmore Pine, Latest of All, and Waterloo are the best late kinds for this district. The best of the newer sorts are Veitch's Perfection and Laxton's Monarch. I consider that early in August is the best time to plant, so that the plants may get thoroughly established before severe weather sets in, and thus be able to produce a fair crop of fruit the following season. If the soil is dry and the weather bright at planting time it is, however, necessary to water and mulch. Extra attention of this description is well repaid, because it enables the cultivator to secure a crop in less than a year from the time of planting, when, without such attention, but little if any fruit would be obtained till the second year.—H. DUNKIN, *Castle Gardens, Warwick*.

—The best flavoured kinds of Strawberries grown here I consider to be Vicomtesse H. de Thury, President, Sir J. Paxton, and Royal Sovereign, in order of names. The best early kinds, as far as I have grown here, are Royal Sovereign and Vicomtesse H. de Thury. Elton Pine is relied upon for a late supply. Royal Sovereign I consider a very useful variety both for earliness and general cropping. For earliest crop I always plant out rooted runners in August at 1 foot apart each way on a south border, and treat them as annuals, destroying them as soon as fruiting is over. These produce ripe fruits from a week to ten days earlier than old-established beds. General planting is also done at this time or earlier.—C. HERRIN, *Dropmore*.

—Up to the present time I have found none to supersede Keens' Seedling in point of flavour, but, unfortunately, the stock, unless frequently changed, has a habit of growing out and becoming valueless. In spite of this drawback, I retain it on account of its high flavour, which is very rich indeed, and it always meets with appreciation. The next kind is Sir J. Paxton, which with me is always richly flavoured, and it is a variety eminently suited to this soil. It is now some thirty years since this kind was first introduced here, and the stock has never been changed: in fact, the necessity for doing so has never arisen, as it is as vigorous as ever, and exhibits not the slightest sign of being worn out. Whether I have a superior strain or not I am unable to say, but certain it is that for size, colour, and, above all, flavour I have not yet found anything to beat it. Next come Gunton Park and Lord Suffield, both of which possess very high flavour. These and the two varieties previously mentioned form a quartette of the best flavoured kinds most suited to this soil. Royal Sovereign has proved to be the best early Strawberry yet introduced for this district, and as such it will be largely grown for many years to come. It is a vigorous and a hardy grower, and produces very heavy crops of fruit. The individual berries are large, and well coloured, and the flavour is also very good indeed. So very satisfactory has Royal Sovereign proved to be here that several hundred more

plants have been set out just lately. Regarding late kinds, I find nothing to equal Oxonian for late use, and this after repeated trials. Here the fruits attain a richness of flavour which is lacking in many places, and it will continue to be grown until a better is found. Royal Sovereign and Oxonian are the best early and late kinds in this district. I am not in a position to give an opinion as to the merits of Leader and Monarch as I prefer to give them another season's trial before doing so; but with regard to other varieties my choice falls upon Gunton Park, Royal Sovereign, Lord Suffield, and Empress of India. The best time for planting is as early in August as circumstances will allow, as an excellent crop of fruit, and that of a superior quality, is secured the first season. My method is to layer the requisite number of runners as soon as enough have been secured for pots, and to plant these out as soon as they are well rooted and before they become pot-bound. With one exception the plantations are broken up after fruiting the third season, so that one-third of the number of plants grown is replaced annually with young stock. The exception mentioned is the case of Oxonian, which is best treated as biennial, as the crop produced the third season is very poor. This is the system that I find answer best, and by its adoption heavy and continuous crops are secured.—A. WARD, *St. Edith Gardens, Hereford*.

## GARDEN FLORA.

### PLATE 1142.

#### THE IRISH HEATH.

(WITH A COLOURED PLATE OF DABECIA POLIFOLIA.\*)

THE charm, both in habit and flower, which is characteristic of almost all the dwarf members of the Heath family, is well shown by the Irish Heath. Of neat and graceful habit, flowering with great freedom and over long season, of exquisite beauty of blossom, is, besides, very hardy and of easier cultivation than many of its allies. It is a native of Western Europe and has been found in Ireland, Western France, Northern Spain, and in the Azores. In Ireland it is most abundant in Connemara, but has also been gathered near the lakes of Killarney. On the mountains of Mayo it has been collected at elevations of over 2600 feet above sea level. The common name for it in the west of Ireland is St. Dabeoc's Heath, from which the present generic name was derived. The genus is nearly allied to *Menziesia*, to which it belonged till 1834, when was separated by David Don. It is a shrub from 1 foot to 2 feet high and forms a dwarf evergreen bush with erect branches. The drooping flowers are borne in erect racemes, each 3 inch to 6 inches long. In the commonest form (as the one which may be regarded as the type) the flowers are of a bright purple. The white variety was discovered in Connemara in 1827. These two forms are here figured, but there is also a third known as var. bicolor, which bears both purple and white flowers, both colours occasionally appearing on even the same flower. It blooms from early June to October.

The Irish Heath thrives under the conditions which suit the great bulk of the Ericaceae. It should have a peaty soil or, if that is not available, a good loam devoid of lime and with plenty of leaf-soil. It ripens seeds in plenty, and their means can be raised in abundance. The seeds should be sown at any time after they are ripe in well-drained pans of peaty soil and stored.

\* Drawn for THE GARDEN by H. G. Moon, Gravetye Manor. Lithographed and printed by J. Gouffart.



IRISH HEATH *VERBENA POLIUM* L.



a cool, moist pit or frame. When large enough the seedlings should be pricked off into pans or boxes and eventually planted out to the nursery border, where they flower the second season. When grown from seed the plants show a tendency to vary. At Kew there are now some curious specimens raised from seed of the typical form which are as dwarf and close in habit as some of the Stonecrops. Ordinary seasons it is perfectly hardy, but, like several other native shrubs, it suffered during the severe frosts of January and February, 1855. Contrary to most of the shrubs that were affected by that terrible spell of cold, it was the young plants that were least injured; both old and young were killed to the ground, but the latter broke into growth again much the more freely. But such a season may come only once in a generation. Of its value as an ornamental shrub there can be no question. It may be grown as an edging to other taller peat-loving shrubs, or as a sort of undergrowth where they are not too thickly planted. It is also pretty and effective when grown in groups.—  
W. J. BEAN.

— Among the reasons which we have given in THE GARDEN—and strong ones we think—why English names to garden plants there is one which perhaps has not had enough consideration, namely, the fact of the frequent alteration of Latin names inevitable perhaps owing to the growth of knowledge breaking down the barriers between the genera. Recently, for instance, one may look in vain for the long-known name of the beautiful Irish Heath in the London catalogue of British plants; it has got a new Latin name—*Boretta*. With a good English name these changes are of less consequence.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**CELERY.**—Nothing could be more favourable than the weather and soil for moulding up this crop; the only thing that one has to fear is that if the work is pushed on too rapidly on light and porous soils the roots will lack sufficient moisture to ensure the produce being of the highest quality. Indeed, I have proved this already, as for the last week the Celery which I have been digging is taken from soil almost dust-dry, and it is somewhat tough in consequence. As it is hardly expected that there will be sufficient rain now to penetrate to the roots of that which has been moulded up for some weeks, I shall lift what is required quite a day in advance. A good portion of soil will be retained on the roots, the outer foliage will be tied round loosely with a strip of matting, and the heads will be stood in a few tubs of water in a cool, dark cellar. I find this improves it greatly, and it is decidedly more crisp than when used direct from the dry soil. It may appear strange to water this crop in October, but it would certainly be a wise plan on dry soils with later batches. By giving the trenches a good soaking advantage could be taken of the dry weather to draw soil round the plants, as when rain does come a favourable opportunity may not occur. There is one advantage with the present dry weather, viz., less danger of worms and slugs eating into the centres, and the crops should turn out clean. It is later, however, in the soils that this has to be contended with, and before recommended, a good dusting of lime should be given about the plants before the soil is drawn round them. A sharp look out should be kept for diseased leaves, which should be picked off at once and burnt. It is surprising how quickly this disease spreads when not checked.

**BROCCOLI.**—Long before Autumn Giant Cauliflowers will be over the earliest of the Broccoli will be turning in. In my case the varieties will be Snow's Winter White and Veitch's Self-pro-

teeting Autumn. The absence of rain, together with more than the usual amount of sun at this season, has caused the plants to remain much dwarfer than we generally see them at this date. This is a great advantage, as they are less liable to be damaged by frost, owing to the leaves being of a firmer texture, and they are more easily retarded by either lifting or removing them to a north border, or by simply heeling them over than is the case when they have made large sappy growth. The plantations should be looked over frequently, and the plants should be so regulated that not more than what is required to meet the demand allowed to turn in. Where no attention is given in this way the heads come on too quickly, and many of them become too large before they can be used, and as a result are wasted. This is more to be regretted where there is not a large quantity of later varieties coming on to succeed them. Broccoli when they have attained the size of a cricket ball are in the best condition for retarding, as this is the most serviceable size for the dining room, and the check they receive by being lifted and laid in a cool position preserves them in this state over a much longer period than when they are left undisturbed. Smaller quantities may be lifted with a good ball of earth and stood in a cool shed, but the foliage soon turns yellow, and this plan is not nearly so satisfactory as keeping them in the open. While on the subject of Broccoli I may add that fewer kinds are really required to maintain a long supply than is supposed. For instance, I have Snow's Winter White in three stages of development by sowing in March, April, and May. Those sown first are now turning in, and the later batches promise to give a long season from this one variety.

**CAULIFLOWERS.**—Autumn-sown plants will have become quite sturdy, and they should be still fully exposed as long as possible. It only requires the protection of glass for a very short period to alter their appearance and cause them to draw up weakly. It is almost better to run the risk of a little frost at this season than commence to coddle them, as the more hardy they can be made, the better able are they to stand severe weather later on. The surface soil should be slightly stirred between the plants and a dusting of soot or lime applied, but as a firm root-hold tends to the formation of sturdy growth, it may prove an advantage, after treating the plants as described, to make the soil firm about them by treading. Later sowings made in frames for spring planting should have the lights kept off them as long as possible. See that the seedlings are not too crowded. A one-light frame will protect a large number of small plants during the winter, and when it is not desirable to prick these off now to allow them more room, all the smallest should be drawn out to allow each plant to stand clear of its neighbour. Press the soil firmly round the roots of those which remain after thinning and work a little fresh loam between them if they have become rather leggy.

**LETTUCE AND ENDIVE** which have been planted on old hot-beds will probably require watering after the present spell of dry weather. The leaves, &c., which were used to make up the beds will act as drainage, and the small depth of soil above them is apt to become dry. There should be no lack of salad this winter, as it has been a most favourable time for getting the plants forward. In spite of this, however, accidents do happen, and where there is likely to be a scarcity of Lettuce later on I would recommend sowing seed now in shallow boxes. Veitch's Golden Queen and Early Paris Market are the best for this purpose, as they naturally turn in quickly, and being of very compact habit, they are more suitable for box culture than the larger-growing kinds. Boxes about 3 inches deep should be filled with light rich soil and the seed sown rather thickly, covering it afterwards with sandy soil. Water through a fine rose, and stand the boxes on a shelf near the glass in a warm greenhouse. If desirable, the seedlings may be allowed to grow thickly and simply cut over like Cress when about 3 inches or 4 inches high.

**FRENCH BEANS** growing in unbeated pits should have the protection of double mats at night, as, though there may be an absence of frost, a low temperature checks the quick growth of the pods. It would be better not to ventilate too freely, and what air is allowed during mid-day should be taken off again while the sun strikes the lights, so as to conserve as much solar warmth as possible. Later batches in pots should be placed near the glass in a nice growing temperature. A high night temperature is not desirable, and great care should be used not to overheat the pipes, this leading to weak growth as well as attacks from red spider.

RICHARD PARKER.

### FRUIT HOUSES.

**LATE VINERY.**—Lady Downe's and other late varieties usually grown with them will now be quite ripe, when a dry atmosphere and a free circulation of air on every favourable occasion, or when the temperature exceeds 50°, will be needed. A little artificial warmth will be required to keep the air of the house dry. When the weather clears up after a spell of foggy weather, take advantage of the first fine day to give the house a thorough airing, well heating the pipes at the same time for a few hours, when all moisture, should there be any, will be quickly dispelled. All leaves should be gathered up daily as they fall from the Vines, and the washing of the floors should now cease, as occasional sweeping with a soft hair-broom will suffice to keep them clean until the Grapes are bottled. Should any of the inside borders require water, afford it on fine days only, and well cover the surface afterwards with a good thickness of dry litter to keep back damp. Outside borders, if not covered as advised, should be done forthwith. Look the Grapes over once or twice a week and cut out any berries found to be decaying, and with a camel's-hair brush carefully remove webs if spiders have taken up their abode in the interior of the bunches. All corners and any places likely to afford these pests congenial quarters should also be brushed out weekly. Where these late Grapes are not yet finished sufficient artificial heat must be given to keep the temperature up to the mark, and this must be persisted in until every berry is properly coloured and finished. Air also must be admitted on every favourable opportunity. See that inside borders do not suffer from want of water, and continue to apply it at a temperature of 85° until the Grapes are ripe, well mulching the surface with some dry non-conducting material to prevent moisture rising and condensing on the berries and roof glass.

**MUSCATS.**—These, if occupying a house to themselves, may be treated a little differently, a few degrees more warmth being beneficial. On the other hand they must not be kept too warm, otherwise the berries will shrivel. A safe rule is to keep a night temperature of 50° with an addition of 5° more for the day. Above these figures air may be admitted on every fine day, but avoid cold cutting draughts, as these will soon rust the berries, and shut it off early in the day in low-lying, damp situations. If the above figures are objected to as being too high, care must be taken to see that the temperature does not get too low, or so that moisture is deposited on the berries. If there are any bunches still hanging on any of the earlier started Muscats they should be cut and bottled, which will enable the house to be freely aired, borders attended to if necessary, and the Vines themselves subjected to a more perfect season of rest.

**LATE HAMBROS.**—These having such thin skins will require careful treatment during the ensuing month, when we are liable to so much foggy weather, and when the Vines will be shedding their leaves. The air must be kept in motion by keeping the hot water pipes slightly warmed both by day and night. If there is an inside border it should not be watered unless absolutely necessary, because the roots will find sufficient moisture for

their needs in the outer border should they have the run of both. Look the grapes over frequently, gather up the falling leaves every day, and spare no effort towards keeping them in sound condition. These Grapes, with care, can be kept until the end of the year, when, as far as my experience goes, they are highly appreciated.

**OTHER VINERIES.**—If the remains of any of the crops are still hanging in any of these houses they will keep much better in bottles than on the Vines. The Vines may then be partially pruned, cutting away all sub-lateral growths and shortening back the laterals themselves to a greater or less extent, according to their age and condition. Should the wood on any of the Vines be still unripened, shortening back must be deferred until, by the application of a little fire-heat and plenty of air, the bark assumes a brown appearance. This, however, is not likely to occur with healthy, established Vines, and is a condition generally to be found in young and extra strong rods, or in those whose roots have found their way into the cold subsoil and have got beyond control. Proceed with the pruning of Vines in earlier houses as soon as the leaves are off them, and after washing both them and the structures in a thorough manner, dress them with an insecticide. The rods after the cleaning is effected should be slung loosely from the trellis until starting time arrives. All outside borders still unprotected may be covered at once with Bracken or long dry stable litter, which if so placed that it slopes from the front of the house to the outer edge of border will shed off a considerable amount of water and snow, while it will tend to conserve the little warmth still remaining in the soil.

**LATE MELONS.**—These will require plenty of top and bottom-heat to ensure good flavour. Heat must not be lessened in any degree until the fruits are ready for cutting. The plants as a rule make but little growth at this late season, but the roots require a good deal of water, especially if the compost they are growing in is in proximity to the hot-water pipes. Stimulants may be given, but with caution, as an overdose, particularly towards the finish, would spoil the flavour. Watering is best done early on bright mornings, so that the superabundant moisture may pass away while the ventilators are slightly open. Closing should be done early, and what little damping down is required should be done with a fine rose-pot, syringing being entirely dispensed with. When the fruits begin to colour cease watering and damping, and keep a chink of air on the house night and day if well heated, if not, by day only, to improve the flavour. Late Melons will keep in a sound condition for ten days or a fortnight. A. W.

**The use of autumn-tinted foliage.**—The recent exhibition of the National Chrysanthemum Society at the Royal Aquarium was specially noticeable for the large and varied character which the decorative exhibits partook. Each season it is noticed that a fine variety of foliage with rich autumnal tints is used, and by its adoption flowers of warm and rich colours in particular are made to appear far more effective than they otherwise would. On this occasion lovely growths of the richly-coloured *Ampelopsis Veitchi* were seen in most of the exhibits, and their association with blooms of bronze, yellow, and crimson, both under artificial as well as during daylight, further intensified the richness of the colouring. Other subjects, such as the Beech with lovely tints of a golden hue, the rich crimson of the Scarlet Oak, and the long trailing sprays of the Japanese Honey-suckle, were largely used. Occasionally some exceptionally clean and pretty species of Bracken were brought into use, sometimes as the base of an epergne, and at others in the embellishment of a vase of large Japanese blooms. Grasses which had been carefully picked in the early summer and dried were invaluable in light artistic work. Asparagus in long sprays was always seen, this in most instances giving considerable grace and finish to the picture. The use of foliage of a hardy kind should be more frequently used than

is now the case. The National Chrysanthemum Society has done much during recent years in encouraging the display of floral arrangements of all kinds, and there is still room for additional classes. The large vases, each filled with twelve blooms showing cultural excellence, is the beginning of reform in the methods of exhibiting this popular autumn flower, and if classes of this kind could be extended, using autumn foliage certainly at the September and October shows, an object lesson would be given to the flower-loving public, in arranging huge blooms in a different way from that which is generally considered the orthodox one, viz., on boards.—C. A. H.

## CHRYSANTHEMUMS.

### CHRYSANTHEMUMS AT CHELSEA.

ALTHOUGH the Chrysanthemum is justly regarded as pre-eminently a town flower, yet growers in the vicinity of large towns labour under difficulties and disadvantages that are little appreciated by those whose good fortune it is to live in the purer atmosphere of the country. Outside the London radius Chrysanthemums are almost always brighter in tone and richer in the shades of crimson, purple and bronze than within, but cultural difficulties can to a large extent be got over even in town, in proof of which the excellent collection at Messrs. J. Veitch and Sons' Royal Exotic Nursery is a striking object-lesson.

Entering the nursery from the Fulham Road, the visitor passes through a glass structure, the central path of which is lined on both sides with freely-flowered bush plants bearing a multitude of showy blossoms, not so much distinguished for their being new as for their value for the purpose for which they are intended, viz., decoration. In a large greenhouse, containing about 1000 plants that make a brilliant and effective show of colour, we find almost everything that is newest and best in the various types. The collection is not a miscellaneous one, but seems to have been the result of careful selection, and the culture is of a high order of merit. Almost every plant is a proved variety and worthy of the fullest recommendation, unlike some collections, where at times the novelties are a matter of speculation.

Continental varieties here, as elsewhere, show themselves to be very formidable opponents to American and home-grown novelties. *Leocadie Gentils*, a pale lemon-yellow hairy sport from Louis Boelmer, is large and effective. *Louise*, a well-known seedling of M. Ernest Calvat's, is, as usual, massive and good. The same raiser is also represented by *Reine d'Angleterre*, *Le Mouche-rotte*, *Australian Gold* (very large), *M. Chenon de Léché*, *Amiral Avellan*, *President Borel*, *M. G. Montigny*, *Souvenir de Petite Amie*, *l'Emindra*, *M. Geo. Biron*, *President Armand*, *Boule d'Or*, *Commandant Blusset*, all of which are too well known to the average lover of Chrysanthemums to need anything like verbal description. Good yellow Japanese of various types are to be found in *Phebus*, a well-known variety; *Lady Oporto* *Tait*, globular in build, and having long grooved, intermingling florets; *A. H. Fewkes*, *Charles Davis*, *Modesto*, very rich, and *Marjorie Kinder*, large and very fine in colour.

One of the most delicate shades of colour is that found in *Lady Hanham*, whose creamy rose and salmon tint will enable it to find a place with *Charles Davis* and *Vivand Morel*, with both of which it is closely related. *Elthorne Beauty* is large, but the colour is not pleasing to our taste, being of an undecided rosy mauve. *Eda Prass*, pale pink, is good in form and colour. *Sunflower*, *Col. W. B. Smith* and *H. L. Sunderbruch* need only be mentioned by name, and such white varieties as *Pride of Exmouth*, *C. B. Haywood*, *Mrs. C. Blick*, *Simplicity*, *Mutual Friend*, and *Miss Elsie Teichmann* are no new-comers this season.

*Mrs. Hermann Kloss* is very rich even for a Japanese: it is of a deep warm golden terra-cotta, tipped gold. *Pride of Madford*, deep vel-

vety plum-coloured amaranth, with silvery reverse, is large and seems likely to remain. The crimson *William Seward* and *John Shrimpton* still maintain their reputation for richness and distinctness of colour, but close at hand is a very large rival called *Octoroon*, with incurving florets of deep blood-red and reverse of golden bronze. *Mrs. G. W. Palmer* is a golden-bronze sport from *Mrs. C. Harman-Payne*. *Lady Byron*, lar solid, and good, proves to be quite as fine when first introduced.

The Chelsea collection does not count among its varieties a large proportion of the old incurving type, but *Baron Hirsch* was large and good of capital colour. *Prince of Wales*, *Gold Beverley*, *Mr. J. Kearns*, *Mr. James Murray*, *R. Bahuant*, and *Mme. Darrier* were the principal representatives in their class.

Some *Anemone*-flowered varieties in good form are on view, *Descartes* being one of the largest and best; and *Junon*, very perfect in build and of a pretty soft lavender shade, is worthy of mention. *Mrs. Hugh Gardiner*, of recent introduction, also appears in excellent condition, but this section does not now-a-days seem to attract anything like the attention it used some years ago, and in the trade displays not many of the standard sorts are now-a-days seen in any number.

### OCTOBER CHRYSANTHEMUMS.

THERE were some very fine blooms at the Aquarium show. Many, however, exhibited signs of having been grown in heat, and were not fully open. Such flowers, therefore, gave no criteria as to the merits of the sorts for blossoming in October. *Edith Tabor* and *Mutual Friend* were in good condition, and *Phabus* was represented by several excellent blooms. *Emily Silsbury* could be seen in many instances in first form. This is a capital October variety, and makes a nice pot plant not disbudbed. It is fine and the habit dwarf. *Louise*, as a bushy large incurving flower, was good thus early in the year, and *M. Hoste* comes fully open at this time. It is a large, flat-petalled bloom of a pleasing bluish-white shade. The flowers of *Mme. Gustave Henry* were barely open. They were very large, the long florets slightly incurving at the point. This kind is of easy culture and of short growth. *John Neville* and *Geo. Seward*, welcome kinds, gave nice colour to one or two stands. *Chenon de Léché*, too, although so early in the season, was seen in very good condition. Its tinct colouring is especially bright under a light. *Pride of Madford* stood out among other blooms as one of the largest. This is the first-rate Chrysanthemum for any purpose that was named in some instances *Beauty of Te-mouth*. In the first-prize group *Elthorne Beauty* appeared most distinct and showy; it is a variety of a pleasing pink colour and a bloom of nice form. *Mme. G. Bruant* is a fine addition regards size, the flowers are very large, the florets being handsomely drooping. It is white with rose-coloured points to the florets. These are of unusual length. It should be noted as the novelty of the season likely to be of great value for show. Although *Miss Elsie Teichmann* was not seen at the Aquarium, it is a splendid variety, at its best in October. It reminds of *Mlle. Thérèse Rey*, and has a similar richness in its petals. Being of easy culture, it should place the latter, which disappoints one too often in its habit of forming flower-buds that refuse to develop. *Lady Byron* is another good white now at its best. It is a lovely blossom.

But, apart from exhibition flowers, there are excellent varieties to supply cut bloom early in the autumn in quantity, which are of pretty shape and colour. *Klondyke*, a new yellow of a capital shade, should be noted as very fine. *Sunflower d'Octobre* (another new yellow of a light shade) especially free and likely to become a most useful kind. *Yellow Lady Selborne* and the *White* are very free and valuable. *Rycroft Glory* is a good bush plant; it is very dwarf in growth, the bronzy yellow flowers are of medium size,

ly last well when cut. Source d'Or (a late October sort) is well known; its shade of bronzo is most valuable for all kinds of floral decorations. A first-class early white is Lady Esther Smith; the blooms have substance and a pearly ture; it is exceedingly free-flowering and dwarf. Of somewhat similar shape is Queen of the Earlies. This, too is a first-rate white. Souvenir de Petite Amie is a white sort that reflexes florets instead of being incurved in form, as the last named two are. This is a most useful October kind; the habit is particularly dwarf and free. The old Elaine has white blooms of great purity, hence it is freely grown, although the habit is rather tall. Another tall grower—Mrs. E. G. Hill, bears pretty blush-white flowers in October. Margot is a free salmon-pink sort best useful for cutting; so is Sam Barlow. It produces flowers of that shade in great profusion in this early season. L'He des Plaisirs is a red kind which has been in cultivation some years; it is yet an excellent one. Wm. Holmes (crimson, painted gold) has a first-rate habit and flowers best freely. This is a well-known sort which has been surpassed in its way. O. J. Quintus is really an October variety. This has pleasing light pink blooms of medium size. Sunshine (a dull, very bright yellow blossom) strikes one as likely to be good for early flowering. H. S.

#### CHRYSANTHEMUM MRS. HAWKINS.

The golden sport to which "J. C." (p. 296) refers doubtless the above, and has been eight or nine years in cultivation. It originated in at least two places at about the same time, and gained a good deal of notoriety. The same sport occurred in my own case, the flowers of a large plant of Mrs. Wormig coming wholly golden, and from which my stock of Mrs. Hawkins has been raised. I took the precaution, however, of verifying my stock by comparing it with the certificated plants in Covent Garden Market. In the varying stocks of Mrs. Hawkins in cultivation to-day some are much more free of growth than others, and, apart from this, the deepest coloured form I have seen has rather smaller blooms. In my own district there are several large growers who have never bought their present stock of yellow or golden Desgrange, this having sported either wholly or partly from the then existing stock of white. The stock is a particularly free-branching variety and appears intermediate in tone. I believe there are in cultivation to-day several slightly varying shades of yellow in this group that are quite distinct, when seen side by side, from the named varieties that are mostly grown. These latter, four in number, are given in the order in which they originated. One, Castex Desgrange (white, yellow centre), Mrs. G. Wormig (clear canary-yellow), Mrs. Drell (a very pale sulphur or straw-yellow), and Mrs. Hawkins (the deep, almost golden yellow, the best of all the yellows, and still without a rival in the very early kinds). And then, apart from the differing shades of colour, those who grow the plants naturally and in quantity will not fail to note the sportive character of the blooms. To years ago I selected a large spray of a very pale white sport in which the flowers were pure white, but though I layered the branch and rooted cuttings and grew the old plant again, I never saw any more of what I imagined promised to be an acquisition. My most recent sport was noted before the scientific committee of the Royal Horticultural Society a year ago. In this case all the usual ray florets were suppressed, and the active greenish florets, scarcely 1 inch long, appeared instead. At first sight the incident appeared to be want of good or proper nourishment, but the sportive plant was one of two growing in the same pot, and, of course, receiving sport identical with another that developed the usual flowers. E. JENKINS.  
Hampton Hill.

Fungus on Chrysanthemum leaves.—I found some leaves of Chrysanthemums with fungus

on the underside. The disease was first noticed on some new sorts of this year's growing, but it has spread on many more, and syringing with insecticides does not stop it. Since the plants have been housed this disease has increased. I should be obliged if some reader could tell me what is the cause of it and a probable cure.—M. S. P.

\*.\* The leaves are covered with a disease known as leaf rust, most destructive, but not often seen. Sulphide of potassium at the strength of a quarter of an ounce to a gallon of water has been effectual in such cases. This should be syringed on the undersides of the affected leaves. I would take off the leaves and destroy them if not within about 18 inches of the blooms. They would serve no useful purpose at this season in developing the flowers.—H. S.

#### SHORT NOTES.—CHRYSANTHEMUMS.

**Chrysanthemum Soleil d'Octobre.**—As its name implies, this is an early variety, but very pretty and of good size. The colour is a pure chaste pale yellow.

**Chrysanthemum White Swan.**—Admirers of the hairy section will find in this a large Japanese variety in which the hairiness is very marked. The petals are long, tubular, very pure white, just faintly tinted in the centre.

**Chrysanthemum Lady Hanham.**—Like Charles Davis, this is a sport from the well-known variety Vivand Morel, which it very closely resembles in form. The difference, however, is chiefly in colour, a delicate shade of cream and salmon-rose.

**Chrysanthemum Mr. Hurley.**—A promising market variety of pretty Japanese form and rather larger than these flowers usually are. The colour is golden terra-cotta and should be very effective under artificial light. Mr. Godfrey says the plant is free flowering.

**Chrysanthemum Leocadie Gentils** is a hairy variety, a sport from *Enfant des deux Mondes*. It was shown last year in Paris in very good form, but under English cultivation it seems far superior this year. The colour is pale clear lemon-yellow, very pure and effective.

**Chrysanthemum Buff Globe.**—Good Gracious, an American variety with curiously twisted florets, is already known, as also is its white sport. Buff Globe is another sport from the same parent, but in colour of a very decided cinnamon-buff. It is large and of good substance.

**Chrysanthemum Mme. Ed. Roger.**—This is one of the most curious and, at the same time, one of the most distinct novelties we have ever yet met with. In build it is Japanese incurved with medium-sized grooved florets. It is large, solid, and compact, and the colour pure pale sea green. The raiser is M. Ernest Calvat.

**Chrysanthemum Yellow Gem.**—This is a charming little pompon flower, and invaluable for cutting. Messrs. H. Cammell and Sons had a capital bunch of this variety in their stand at the recent show at the Royal Aquarium. When grown in a free manner, the blossoms, each about 1½ inches in diameter, develop pretty little full heads. The fimbriated florets also add to their attractiveness. The plant is dwarf and the colour a bright citron-yellow.—B. C.

**Chrysanthemum Mme. la Comtesse Foucher de Cariel.**—At the time of writing (Oct. 18) this variety is at its best. It is of dwarf, branching habit of growth, not exceeding 2½ feet in height, most profuse blossoming, and in colour a bright orange-terra-cotta. This variety does not take kindly to disbudding, and is never seen better than when grown in the freest manner possible. The sprays of blossoms are extremely useful for decoration at this season.—C.

**Chrysanthemum Mrs. Geo. Hill.**—This pretty little decorative Japanese sort is said to be a seedling from Lady Selborne. A plant was recently shown by Mr. M. Russell at the National Chrysanthemum Society's floral committee meeting, and appeared to possess a fair habit of growth, height not exceeding 3 feet. The blossoms are each from 3 inches to 4 inches in diameter, creamy white, the centre being sulphur-yellow, deepening at the base.—C. A. H.

**Chrysanthemum Notaire Groz.**—A few plants of this variety in the border last year were so pretty and free flowering that it was determined to

grow it more extensively this year. The wisdom of doing so is seen in the delightful display the plants are now making. They are rather taller than most of the others, being quite 4 feet in height, yet making fine bushes, with elegant sprays of dainty little blossoms of delicate lilac-mauve. For cutting, this pretty little Japanese flower should be largely grown.—C.

**Chrysanthemum Philippe Rivoire.**—This promising Japanese variety was exhibited before the floral committee of the National Chrysanthemum Society on October 12 by two different growers, one set of blooms under the above name, and another with the prefix Madame. The flower is very large, with long and broad florets, possessing much substance. The florets are also slightly twisted and curled. Some of the flowers, evidently those from early buds, were somewhat coarse, but others, no doubt from later buds, were very neat and promised to be of considerable value for exhibition.—C. A. H.

## ORCHARD AND FRUIT GARDEN.

### LIFTING ROOTS OF APRICOT TREES.

ONE of the most common causes of failure in Apricot culture is planting the trees in a too rich compost at the outset, which mistaken kindness leads to nothing but quantities of gross, unfruitful wood being made. This growth is also continued late in the autumn, and the natural consequence is that the wood, by reason of its soft, sappy nature, cannot possibly ripen. These gross-habited trees sooner or later fall a prey to gumming, branch dying follows close in its wake, and they ultimately die. Very often in such cases the climate or soil is blamed as being unsuitable, while in reality the fault lies in the border having been constructed of far too rich materials. Another cause of Apricot trees making gross wood may be traced to the digging in of heavy doses of manure when the borders in front of the trees have to be utilised for vegetable growing, particularly if they are cropped up to within 3 feet of the wall. The remedy for this is only too apparent, but when kitchen gardens are small and the utmost use has to be made of every foot of ground, it cannot very well be avoided. There is a remedy both in this and the foregoing case as far as the Apricot trees are concerned, and that consists in root lifting now and again, or when necessary. When the unfruitfulness of the trees arises from the cause mentioned at the commencement of this note, the proper course to pursue is not only to lift partially or entirely, but also to remove the rich compost which has been the cause of the mischief and replace it with that of a poorer and more calcareous nature. In the other case, when close cropping and manuring of the borders cannot be obviated, the trees should be subjected to a periodical root-lifting in precisely the same manner as are Peach trees when well managed. This will cause the trees to make short-jointed wood of medium strength, which will be clothed from base to tip with fruit-buds. No greater mistake can be made than giving Apricots a too rich rooting medium, and my experience teaches me that the less rich the soil is within reason the better the results. I gather my finest fruits of Moor Park, from trees which are planted in a compost consisting of quite one-third of broken bricks, lime rubble, and a little wood ashes, the remaining two-thirds being the loam of the locality, which is inclined to be heavy and contains a rather high percentage of lime. In this the trees make medium growth, are extremely fruitful, and enjoy almost complete immunity from sudden loss of branches. Other trees planted in compost into which calcareous matter does not enter so largely in its composition are quite as fruitful, but they are more subject to branch

dying, and since discovering the beneficial effect of the employment of a larger percentage of the materials named, they are freely used when planting new trees.

Animal manure I avoid altogether, and always employ it simply as a mulch, when it does a deal of good by attracting and keeping the roots near the surface. Should manure be deemed necessary through the loam being considered at any time to be of poor quality, it is supplied in the shape of half-inch bones and bone-meal, both of which encourage the formation of wood of the right description. Although the season is far advanced for lifting the roots, it is not yet too late to undertake it, and I would strongly urge those possessing trees which make a great deal of growth and bear but little or no fruit, to deal with them in the manner indicated. Trees that are too far gone should be grubbed out and fresh ones planted in new compost, taking care at the same time to mix plenty of calcareous matter with it. Those having light sandy loam to deal with would find the addition of marl or clay beneficial, and half-inch bones or bone-meal should also be added. The amount of lifting required will depend entirely on the condition of the tree. Partial lifting may suffice in some cases where strong growth merely requires a check, but when the trees are altogether unfruitful, it is then necessary to lift, if not quite entirely, certainly to remove all the soil about the roots with the exception of that immediately surrounding the main roots close up to the stem. This would leave a fair-sized ball of old soil, and the new soil can be placed and made firm all round it as the filling in proceeds. The new soil should be made firm and watered home to

possible, so that the roots, particularly the fibrous ones, do not become dry, and it may be necessary in cases where the trees still have

form. From trees on a south wall grandly colour fruits are obtained, but they mature too early. This may not happen in a good holding soil or



*Pear Fondante d'Automne.*

green leaves upon them to syringe them for a few days to prevent them flagging. A. W.

#### APPLE LEMON PIPPIN.

MANY growers favour the larger Apples, and do not think such small kinds as Lemon Pippin desirable. They lose sight of the free-cropping character of many of the smaller or medium-sized Apples and do not take quality into consideration, which is a great point. This variety may be termed medium-sized when well grown, the fruits oval, the skin green, turning to a yellow or lemon colour when ripe, eye small and stalk short, with a peculiar fleshy knob in which the stalk is inserted. When gathered from trees with full exposure the fruits are streaked with russet on the sunny side, and at the turn of the year much resemble a medium-sized Lemon in appearance. This variety does not possess many synonyms, like many other Apples, possibly owing to its distinct appearance. It is pleasantly acid, flesh firm, and when gathered late and stored in a cool place it does not shrivel like many late fruits, retaining its good flavour till the last. This variety on the Paradise stock is one of the best Apples an amateur can grow for late use, as it may be had as late as April.

**Pear Magnate.**—I have this seedling Pear in cordon form, and have on previous occasions referred to its good cropping qualities. This year on a south wall I had grand fruits and of excellent quality. At p. 309 "A. W." writes of the cropping powers of this variety and inquires as to its quality. This shows that in his district the fruit must be later. I endeavoured to keep fruits for September 30, but failed

in older districts. I notice it is a favourite for exhibition, but I think Marguerite Marrilat, a very fine showy new variety, is superior as regards flavour. Does "A. W." grow this variety? With me it is a grand fruit, but I only have in cordon form, and from a bush it may not be so large, but it will, I think, be profitable on Quince if grown for early use. It bears fruit when young.—G. WYTHES.

#### GOOD AUTUMN PEARS.

OF good autumn Pears there is no lack, scarcity being felt later on. New kinds such as Le Lectier, Baron Leroy, Beurré Dumont, Duchesse de Bordeaux will be most valuable they succeed in our climate, in lengthening the Pear season. One of the best autumn fruit is Fondante d'Automne, here illustrated. Varieties are superior in quality when in sea. Unfortunately, it decays quickly, so that it is scarce in storing. The fruits of this variety are medium-sized, though on cordon trees this variety with a light crop they have exceeded the named and have been of superior quality, the white, melting, very juicy, and rich, roundish fruits covered with brown russet, especially in heavy soils. Its season is generally as October, but this year some of my fruit were ripe at the end of September. It is not so common as it deserves, as it is not so showy a fruit. On the other hand, its usefulness should commend it to all Pear lovers. The growth of this variety is very distinct, the leaves rather small, and the growth vigor. It rarely fails to crop. I have seen grand crops of this variety in the southern counties on standard trees, but I prefer it grown in bush or pyramid form on the Quince, as thus one gets a better flavour and it is an easy matter to pick the fruits, also to feed the trees when cropped freely. In cordon form the fruits are large and useful for special purposes. Grown thus it is a sure fruiter if the roots are not too deep in the wood allowed to get too gross. It is an excellent variety grown as an espalier, as it fruits so quickly in a young state, and in the northern parts of the kingdom, grown in various ways it is much valued, as it gives later fruit, rarely fails.



*Apple Lemon Pippin.*

settle it about the roots, applying a mulch to the surface as soon as the work is completed. The work must be done as expeditiously as

some of the largest going soft. It must be classed as a valuable addition to the early Pears, but in my opinion it will be of better quality grown in bush

Whilst referring to the qualities of this my note would not be complete with-mention of Thompson's, another variety grown so much as it deserves. Where good quality Pears are valued, Thompson's is excellent to follow Fondante d'Automne. Of late the Doyenné du Comice has been more largely grown on account of its good qualities, and it mainly deserves extended culture. We have a large number of poor Pears; indeed, catalogues need much weeding out if quality is to be considered. In the useful catalogue of Pears shown at the Chiswick conference in 1881, Mr. Barron describes over 600 varieties, and I wish he would give us further information on the best kinds. He having had them under close observation for many years, his long experience would be a splendid guide. Of the autumn Pears, the newer Dr. Jules Goussier will, I think, prove a valuable addition to the earlier kinds. This precedes the one named above, and though inferior to it in quality is useful as an early Pear. It closely resembles Williams' Bon Chrétien without the juicy flavour, and appears to be a constant cropper. For quality, I think the new Director Hardy will prove a valuable October fruit, as I have only seen cordon trees fruiting, but it promises well. In a brief note on autumn Pears I do not think it advisable to name older well-known kinds.

G. WYTHES.

**Japanese Plums.**—Have any of your readers made trials in England of the various Japanese Plums which I see alluded to, and sometimes praised for their vigour, fertility, and hardness, in the case of the Satsuma, Botan, and Masu. I ought to give a very good account of themselves in our country if what is said about the hardness be true.—H. L.

**Apple Red Hawthornden.**—Among the notable dishes of Apples at the Crystal Palace that exhibited by Mr. Hartland under the name of Red Hawthornden. This was perfect in every way, the fruits solid, heavy, and clean, with bright red cheeks and very shapely. A clean specimen of the old Hawthornden is very rarely met with as the fruits have a great tendency to be spotted, and a substitute of equal quality as the new Apple and as clean as that here noted would be very acceptable.—J. C. T.

**Apple Autumn Pearmain.**—This was one of the most striking-looking Apples among the new varieties shown at the Crystal Palace. It came from the Sidmouth Nurseries and was presented by a fine dish of large, deep russet, glossy-cheeked fruits, of which one would have to learn more as regards quality and keep-also the section to which they belong. I do not find it under the above name in any fruit list I have by me, and should be glad of any information that can be given about it. It struck me as being the appearance of a good and fairly long-keeping Apple.—J. C. T.

**Pear Duchesse de Bordeaux.**—I noticed at the recent fruit show that the above variety was staged by two exhibitors from Kent. I had hoped to show it, but my fruits dropped owing to frost. It is a fine variety and of excellent flavour. The fruits are large, yellow, covered with pale russet flesh, juicy and melting. It is in season at Christmas, and grown on a cool soil may be kept till February. Last season this variety was also good. It is one of those which are suitable for warm soils. I do not use it for wet soils or exposed positions, and find ample supplies of food whilst perfecting the fruit. My trees are on the Quince stock.—S. B.

**Apple Gravenstein.**—For use during the autumn this variety is much liked. With care rarely fails to crop, my trees being mostly

in bush form. Though grown in this way the growth must not be crowded, as it is of spreading habit in good soil. Gravenstein is so distinct as regards flavour that it is worth room in all gardens. I notice the Royal Horticultural Society in their classification of dessert and cooking Apples place Gravenstein in the dessert class, and rightly so. I have been in places where this variety was preferred to all others for dessert, and was obliged to keep up as long a supply as possible. It is well worth growing on account of its free cropping qualities.—S. M.

**Pear Gansel's Bergamot.**—"J. C." (page 259) notes how seldom this handsome and good Pear is seen. Probably the cause of this is that it is a very slow grower, and not a Pear for every soil and district. Be that as it may, a few magnificent dishes were shown at the recent fruit show at the Crystal Palace, and as seen there it was most attractive, highly coloured, and would prove very valuable for dessert, though ripening at a season when there are many other good Pears to be had. It requires a wall to finish the fruits properly in northern gardens. Some nurserymen send this Pear out only in double grafted form, and probably this is the better way most so as to positions.—J. C. T.

**Pear Durondeau.** It is unfortunate such a splendid looking Pear as Durondeau is not of better quality. I am aware in fruit catalogues it is classed as a large, handsome Pear with rich, delicious flavour, but I fear in a flavour competition it would stand a poor chance. I am aware as an exhibition fruit it has long been a favorite. I would like to see classes at the next great fruit show, under the auspices of the Royal Horticultural Society, for Pears or Apples noted for their flavour. Of course at the season named several varieties would not be in condition to test quality, but the various kinds are so well known that competent judges could with little difficulty give awards when they had good specimens of the best kinds before them. For years I have grown Durondeau in various ways and have endeavoured to get fruits of first quality, but have failed. For size, appearance, and crop it well deserves front rank.—S. M.

**Apple Allington Pippin.**—This new Apple promises to be a standard dessert variety, and its cropping is all one may desire. This year young trees are laden and the fruits are of first-rate quality. I thought highly of this variety when it was certificated a few years ago under the name of South Lincoln Beauty. One must expect great things from such parents, as, if I mistake not, Cox's Orange and King of the Pippins are the parents. This variety more resembles Cox's Orange in quality, but the King in colour. It is in season from November to February, a season good dessert kinds are rather scarce. I saw excellent fruits in May of this variety from bush trees. The tree is a vigorous grower and bears very freely in a young state. I do not know if it will succeed in standard form like King of the Pippins. Its free cropping, in addition to its first-class quality will make it a valuable addition to the late dessert Apples.—G. WYTHES.

**Pear Thompson's.**—This is usually classed as a November Pear, and doubtless in the northern parts of the country its season would be early November, but I have never been able to keep it after the middle of October. This failing is not only the case with Thompson's, as unfortunately many of our best Pears are ripe weeks in advance of the season given in catalogues. Those who value good flavour in fruit cannot do better than add Thompson's to their collection. It was the best at the meeting of the Royal Horticultural Society on the 12th inst., although Doyenné du Comice was pitted against it. I was pleased to see Thompson's take so high a position at the meeting alluded to, as it shows that this Pear, though old, is worthy of first place in any collection for quality alone. This is a point worth more consideration in judging, as huge Pears often only fit for cooking receive favourable notice. In fruit

catalogues Thompson's is recommended as a good kind for standards. I cannot advise it as it has never done well with me. I admit it grows freely, but the trees do much better in a sheltered position; indeed, it is well worth a wall or grown as a bush or pyramid in a sheltered garden. My best trees are those on the Pear stock or double-grafted, the fruit large, and the flesh melting. It may be classed as a fair cropper grown as advised. In my light soil the fruits mature very early, and cannot be kept. It cannot be called a handsome fruit, and I notice only five lots were staged at the Crystal Palace, Mr. Powell having the best dish. I noticed when I lived in Devonshire this variety did well in dwarf bush form. Of late years this Pear has not been seen so much at exhibitions, larger fruits often taking its place. I have had trees on various aspects, but the best flavoured fruit I always get from trees in bush form on a south border.—G. WYTHES.

**Apple White Nonpareil.**—This excellent late-keeping dessert Apple succeeds well when grown as a standard, and it is also a most constant cropper. I have a tree of this description which seldom misses bearing heavy crops of fruit. The tree is more than thirty years old, and it looks likely to continue bearing for many years to come. It also does well grown in bush form, but its habit of growth is rather against it being cultivated as a pyramid, as the branches have a tendency to spread rather than to grow upright. Of the three forms of tree mentioned, I think this Apple is more prolific when grown as a standard, and it may safely be planted as such without any fear as to the results. As regards its habit of growth, it partakes more of the character of Scarlet Nonpareil than of others of this useful class of Apple, the young shoots being slender and only of moderate growth. Like all the Nonpareils, the tree when established produces a profusion of flower-buds, so much so, that growth is then very slow. In shape the fruits resemble those of Scarlet Nonpareil, but instead of being red the skin is a pale straw colour, sometimes strewn with a few russet patches. It is, therefore, not so handsome, but it loses nothing when comparisons are made as far as flavour is concerned, as its greenish flesh is both crisp and juicy and richly-flavoured. It comes into use in January, and when kept in a cool and rather moist place to prevent the skin shrivelling, it may be had in excellent condition for quite three months.—A. W.

**Apples on iron soils.**—When lately in the lower part of Surrey, I was surprised to learn that Apple trees could not be induced to thrive in that district. That seemed odd, seeing that generally these fruits grow well in the county. It was stated that iron permeated the soil of the district very largely. On the other hand, most descriptions of trees seem to do well, there being a great wealth of fine timber, and it is usually held that where ordinary trees grow well Apple trees do well also. I suggested trying the plan I recently mentioned as adopted by Mr. Fyfe, on the ragstone at Lockinge, planting in mounds on the surface and gradually furnishing root space by means of decomposed vegetable matter and garden refuse. Very probably the surface soil of several inches depth is not so highly impregnated with iron as is the lower stratum. For that reason trees may do very well for a few years until the roots get into the iron stratum. It is a somewhat unusual case and may have its parallels elsewhere. If any reader of THE GARDEN has experienced similar difficulty, perhaps he will detail his procedure to overcome such a trouble. The locality in question is high, and in every other respect seems to be as fertile as the surroundings are beautiful. Of course in this case very little may have been done in a practical way to counteract the evil. At Lockinge, because of the presence of chalk so largely in the soil, the Pear trees there have leafage almost yellow, yet seem to be very healthy. So far no application seems to have been able to impart the ordinary green hue to the leafage. This is again another instance of the presence of something noxious in the soil.—A. D.

## FERNS.

## NEPHROLEPISES.

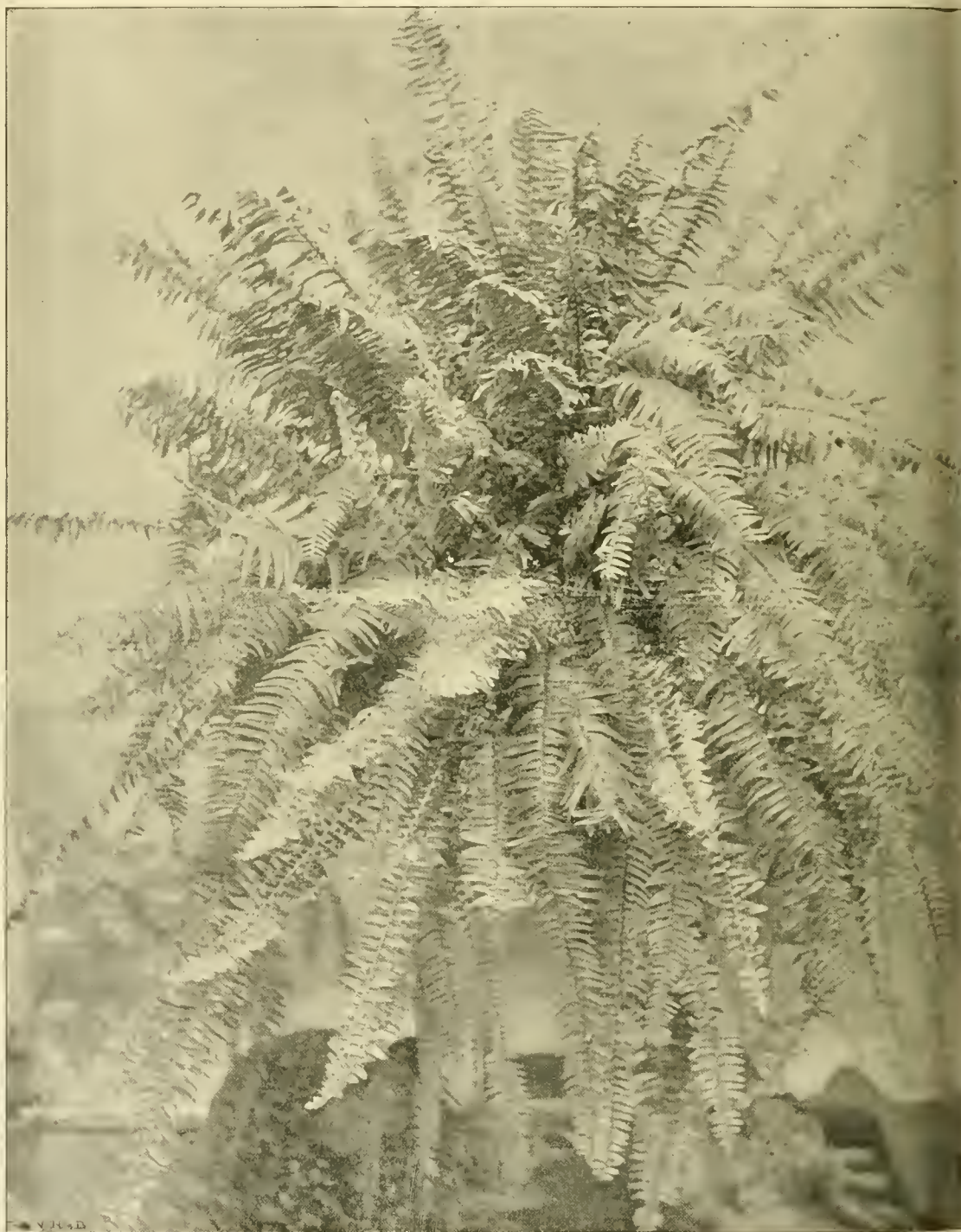
From a gardener's point of view, and on account of their habit and of their mode of growth, the Nephrolepises form a totally distinct group of plants. All the species known to the present

day, and with very few exceptions their varieties, have their fronds simply pinnate, that is to say, once only divided to the midrib, and their leaflets, instead of being fastened to it, are articulated at the base. This character, which is most conspicuously shown in dried specimens, is also very noticeable in living plants when it so happens that through want of sufficient moisture at the roots their leaflets drop off; but even when such is the case the plants, after a few weeks of attentive nursing, soon recover and produce another crop of fresh foliage, which usually takes the place of the fronds previously destroyed. The fronds, which in some kinds attain 4 feet in length, are in most, if not in all, cases produced from crowns disposed on long, thin, rapid-growing stolons or rhizomes of a wiry nature and of almost indefinite length. In some species the fronds themselves have the power of adding annually to their length. This peculiarity was first observed, or at least was first made known, by Mettericus, who, in his "Filices Horti Botanici Lipsiensis," published at Leipzig in 1856, states (p. 99) that there is no necessary limit to the apical development of the fronds in mature plants. In that interesting work on the subject he gives the result of his observations by saying that "the fronds are characterised by the perennial, indefinite growth of the rachis or leaf-stalk, and the consequent unlimited periodical production of the pinnae of the uninjured apex long after the older pinnae have fruited or fallen off. In *N. exaltata* the oldest fronds continue to develop at the apex, and the growth of the frond is limited only by some injury happening to the apex; the limit of the yearly increase of the frond being usually indicated by the smaller size of the pinnae." The production, just below the points where the fronds are inserted on the rhizome, of the slender stolons previously mentioned, is a feature peculiar to the plants contained in this genus, and by this means most of them are

rapidly increased, especially the reputed barren forms, such as *N. Duffii*, *davallioides furcans*, *multiceps* and *plumosa*, *rufescens*, *tripinnatifida*, and also the fertile but very variable *N. davallioides furcans*, the seedlings of which show their crested character in a more or less marked degree. On account of the naturally elegant drooping character of most species, these are par-

ing baskets and growing all around them, thus making perfect balls of gracefully pendulous foliage, which, provided the plants are supplied with water at the roots all the year round, remains a long time in excellent condition.

Most Nephrolepises are of an evergreen nature, *N. Bausei*, *pluma* and *undulata* be-



*Nephrolepis exaltata* as a basket plant.

particularly well adapted for basket culture as also for planting on rockwork, a position in which they soon form ornamental masses of a striking and very attractive nature. They also possess a singular propensity for taking possession of the outer surface of rockwork boulders or of hang-

the only kinds known to be entirely deciduous. These, as also several of the evergreen species, are provided at the end of their rhizomes with small tubers of a succulent nature which serve to reproduce the plants after a period of rest; but it frequently happens that

the only kinds known to be entirely deciduous. These, as also several of the evergreen species, are provided at the end of their rhizomes with small tubers of a succulent nature which serve to reproduce the plants after a period of rest; but it frequently happens that

For a want of knowledge these deciduous kinds should be kept so dry during their resting season, when they should start into growth again, these rains have ceased to live. The soil which contains them must, all through the winter, be in a moderately moist condition, so as to prevent them from shrivelling up and to secure healthy strong growth in the spring. Whether in pots, in baskets, or planted out, the soil used for them should be of an open nature composed of coarsely-broken peat, chopped sphagnum, and silver sand in about equal parts. Such a compost the roots and also the stolons will run freely, and the latter will soon produce young plants, which, if required, may safely be detached from the parent when they have produced three or four fronds.

Epiphytes may also be used with great advantage for covering walls and pillars, as they require but very little soil and can almost be kept thriving on moisture alone. In such positions many of them may also be found to protect themselves from spores, which germinate freely and make nice young plants in a remarkably short time. Although they have no objection to strong light, they succeed best when out of the action of the direct rays of the sun, and, notwithstanding the permanent want of moisture in which their roots require to be kept, it has been amply proved that they are better and that their foliage lasts much longer when the latter is not frequently watered over.

SOCIETIES AND EXHIBITIONS.

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 26.

It would appear as if the exhibitors on this occasion had determined to make the very best display possible, for no finer meeting has ever been held at the end of October. All the table space was occupied, and even the floor as well for groups, so much so, in fact, that it would have been a difficult matter to have found room for any more exhibits.

On every side there were objects of the greatest interest. Chrysanthemums were, of course, strikingly in evidence both in groups of plants and in cut flowers. The Japanese forms were present in far the greater quantity, and of these there were several decided novelties. If the present decision may be taken as any criterion of what will be produced at the coming November exhibition, the standard will be a remarkably high one indeed. The weather during the present month has without doubt had a most beneficial effect, in connection with good culture, in developing big class flowers. The plants on this occasion bore flowers of the best possible quality, colour, substance, and size combined. The same good results were also apparent in the cut blooms, which were again staged in nearly every instance with long stems and plenty of foliage, which is infinitely better than the old method, wherein no foliage whatever is to be seen, save upon an occasional flower in the front row. With small Ferns and other plants of convenient size the effect is very greatly enhanced. A grand group of *Ignonia Gloire de Lorraine* was again exhibited in its most marvellous condition and profusion of flower, coming from the same source as at the recent meeting. Roses, too, were staged in excellent condition, considering the lateness of the season. Of *Nerines* there was a most remarkable exhibit, several new and most uncommon varieties being staged, the setting up being very commendable indeed. A group of fine-foliaged plants likewise added to the interest of the meeting.

Orchids on this occasion made a most distinct advance both in quantity and effect. Cattleyas of

the labiata section were present in quantity, and *Vanda carulea* was well represented also. The style of setting up the several groups of Orchids is decidedly improving. Effect is not enhanced by overcrowding, but it is most certainly so by the addition of a few small Ferns, &c.

Fruit was shown in considerable quantity again, some first-class examples of both Apples and Pears being staged. Grapes were represented by one fine collection of autumn kinds in well-finished bunches. Vegetables were shown also, and exceedingly well, the selections being typical of the best varieties in each class.

The attendance was remarkable, and the keenest interest was evinced in the meeting.

Orchid Committee.

Awards of merit were adjudged to—

**CATLEYA HARDYANA MAGNIFICA.**—A lovely form, with delicate rose sepals and petals mottled with white, lip deep crimson-purple in front, shading to bright yellow in the opening of the throat. The side lobes are purple, shading to yellow, striped with brown at the base. From Mr. F. Hardy.

**C. BOWRINGIANA** (Pallant's var.).—A remarkable form, the sepals, petals, and lip being nearly twice the size of those of the typical form, the colour also being deeper. It carried a spike of twenty flowers. The growth of the plant was very distinct, and nearly 3 feet long. From Mr. R. Pallant, Weybridge.

**LÆLIA PRESTANS ALBENS.**—A distinct form, the sepals and petals white, slightly tinted with rose, lip white, with a band of purple running round the centre, and bright yellow in the throat. From Mr. F. Hardy.

**CYPRIPEDIUM HAYNALDO-CHAMBERLAINIANUM.** A distinct and pretty hybrid, raised from the species from which the name is derived, the dorsal sepal white, lined and suffused with rose, spotted with brown at the base. The petals have the characters of those of *C. Chamberlainianum*, green-spotted, and suffused with brown, the lip deep rose, shading to pale green at the base, margined with yellow at the opening of the pouch. From Mr. E. Ashworth.

**CATLEYA OLIVIA** (*C. Trianae* × *C. intermedia*).—A distinct and delicate form, with pale rose-tinted sepals and petals; lip pale rose in front shading to white, suffused with yellow at the base; the side lobes white, shaded with rose. From Messrs. J. Veitch and Sons.

**CATLEYA MELPOMENE** (*C. Mendeli* × *C. Forbesi*).—A pretty form with deep rose sepals and petals, the lip rose, heavily fringed at the margin, shading to yellow at the base, the side lobes rose, shading to white, and suffused with brown at the base. From Messrs. J. Veitch and Sons.

**ODONTOGLOSSUM CRISPUM SUNLIGHT.**—A lovely form with white sepals and petals, the sepals suffused with rose in the centre and heavily spotted with bright brown. The petals have numerous small spots of the same colour, the lip white, shading to yellow, and spotted with brown in the centre. A cut spike of eleven flowers came from Mr. R. B. White.

**LÆLIA PUMILA MAGNIFICA.**—A remarkable form with extra broad sepals and petals, deep rose in colour, the lip deep crimson-purple, shading to yellow in the throat. It has a prominent white blotch in the centre. The plant carried two flowers. From Messrs. W. L. Lewis and Co.

**LÆLIA PURPURATA** (var. *Mrs. R. I. Measures*).—A lovely form, the sepals white, slightly suffused with rose; the petals white, heavily veined and suffused with purple, the lip crimson-purple in front; the side lobes also deep purple shading to yellow, lined with purple at the base. The plant carried three racemes of flowers, two with three and one with four flowers each. It is one of the most distinct we have seen. From Mr. R. I. Measures, Cambridge Lodge.

A botanical certificate was awarded to *Lælia longipes*, a well-known species, with deep rose sepals and petals and bright yellow lip. From Messrs. W. L. Lewis and Co.

Messrs. J. Veitch and Sons sent a large and interesting group. In this were finely-flowered *Oncidium*s, *Dendrobium stratiotes*, and *D. taurinum* var. *amboinense*. Amongst the many forms of *Cypripedium*s were large made-up specimens of *C. insigne* in fine varieties, *C. Lecanum*, *C. Arthurianum*, and *C. T. B. Haywood*. Among the *Cattleyas* were good forms of *C. Mantini* (*C. Bowringiana* × *C. Dowiana*), *C. Wendlandiana* (*C. Warscewiczii* × *C. Bowringiana*) and *Lælio-Cattleya Tiresias* (*L. elegans* × *C. Bowringiana*), having very dark segments. A grand form of *L. C. Pallas*, good varieties of *L. C. Lady Rothschild* (*L. Perrini* × *C. Warscewiczii*) and *L. C. Decia* were also shown (silver-gilt medal). Messrs. H. Low and Co. sent a large group consisting principally of finely-flowered *Vanda carulea*, good forms of *Cypripedium Arthurianum*, *C. Lecanum* and the rare *C. Fascinator* (*C. Spicerianum magnificum* × *C. hirsutissimum*), in which the dorsal sepal is white, heavily suffused with rose, shading to green and spotted with brown at the base. The petals and other segments show the intermediate characters of the parents in a remarkable degree. Messrs. F. Sander and Co. sent a group consisting principally of finely-flowered *Cattleya labiata*, varying from deep rose to white in the sepals and petals, a good form of *C. aurea*, a fine plant of the lovely *Cypripedium insigne* *Sanderi*, and other mountain forms of *C. insigne*. *Miltonia vexillaria superba* and *Habenaria carnea* were also well represented. Messrs. B. S. Williams and Son sent a large group consisting of good forms of *Cattleya Bowringiana*, *C. labiata*, *Lælia Perrini*, *Dendrobium Phalenopsis*, *Vanda tricolor*, *Oncidium Phalenopsis*, and numerous *Cypripedium*s, both species and hybrids. Messrs. W. L. Lewis and Co., Southgate, sent several good forms of *Lælia pumila*.

Mr. R. I. Measures, Cambridge Lodge, Flodden Road, Camberwell, was awarded a silver Flora medal for a large group consisting principally of good forms of *Cattleya labiata*, the most distinct being a variety named *C. l. lilacina*, in which the flowers were wholly of a lilac colour. A large specimen plant of *Oncidium ornithorhynchum album* with seventeen spikes of flower, several of the spikes being upwards of 2 feet in length, was also noteworthy. Amongst the many *Cypripedium*s were *C. Allanianum superbum*, *C. Arthurianum*, and several forms of *C. insigne*, including a yellow form, *Vanda tricolor*, *Oncidium Marshallianum*, *Phalenopsis violacea*, and *Dendrobium aureum* were also well represented. Mr. P. C. Walker, Percy Lodge, Winchmore Hill, sent a nice group consisting of finely-flowered *Oncidium Forbesi*, *Cattleya labiata* in great variety, *C. Bowringiana*, *Dendrobium Phalenopsis*, good forms of *Odontoglossum crispum*, *O. madrense*, and a plant with two flowers of *Scuticaria Hadweni*. A silver Banksian medal was awarded. Mrs. Wingfield, Amphill House, Beds (Mr. Empson, gardener), sent a group of finely-flowered *Oncidium*s, numerous forms of *Cattleya labiata*, *C. aurea*, *C. Bowringiana*, very fine in colour, *Dendrobium formosum*, and *Cypripedium*s in variety. A silver Banksian medal was awarded. Mr. F. Hardy sent three fine forms of *Cattleya aurea* and *L. C. Tydea* (*C. Trianae* × *L. Dayana*). Mr. T. Statter sent the original plant of *Cattleya Hardyana* with three flowers on the spike, the most remarkable feature of the plant being the roots, which had extended through the bottom of the cylinder to the length of 4 feet. *C. aurea Johnsoni*, *C. Wendlandiana*, and a fine spike of *Dendrobium Phalenopsis Schroederi* were also sent. Mr. G. Law-Schofield sent *Lælia purpurata* var. *Annie Louise*, a form very much in the way of the variety *Mrs. R. I. Measures*. Mr. C. J. Ingram sent *Lælio-Cattleya Homère* (*L. Perrini* × *C. Percivaliana*), *L. C. Lady Rothschild*, *L. Diarmid* (*L. Perrini* × *C. elegans Turneri*), and a good form of *C. Bowringiana*. Mr. J. Bradshaw, Southgate, sent a choice collection of *Cattleya labiata*, which included *C. l. R. I. Measures*, *C. l. glauca*, with a slate coloured lip; *C. l. Etoma*, sepals and petals white with a crimson-purple lip; a dark form named *Ruby*, and

*Cypripedium parpuratum*. Mrs. Briggs, Bury Bank House, Accrington, sent two distinct forms of *Cattleya gigas*, *Cypripedium Arthurianum pulchellum* and *C. insigne* Ballie, a yellow form in the way of but inferior to *C. Ernesti*. Mr. Hockliff sent *Cattleya Hardyana*, a pretty form with delicate rose sepals and petals; and Mr. E. Ashworth sent *Cypripedium Arthurianum pulchellum*. Sir T. Lawrence sent a distinct form of *Lalia Perrini*, the sepals and petals white, the ground colour of the lip also white with a distinct band of rose on the front lobe. The plant carried three spikes of flower.

#### Floral Committee.

A first-class certificate was voted to:—

**MARATTIA BURKEL**.—A distinct species, and one, too, which promises to be a decided acquisition. In its parts it is much smaller than most kinds, the growth being compact and the much-divided fronds well clothed with quite small pinnae, thereby giving the plant a most effective appearance. From Messrs. Veitch and Sons, Chelsea.

Awards of merit were awarded to—

**CHRYSANTHEMUM MME. PHILIPPE RIVOIRE** (Japanese large flowered).—A distinct white variety with long drooping florets of unusual breadth. From Mr. J. Godfrey, Exmouth.

**CHRYSANTHEMUM ELLA CURTIS** (Japanese large flowered).—Of a pleasing shade of yellow, the florets drooping and of considerable length. From Mr. Godfrey.

**CHRYSANTHEMUM LADY RIDGEWAY** (Japanese incurved).—A variety with broad petals of a bronzy shade, the reverse much lighter. From Messrs. Cannell and Sons, Swanley.

**CHRYSANTHEMUM SIMPLICITY** (Japanese large flowered).—A pure white kind with gracefully drooping florets, an acquisition and quite distinct. From Messrs. Cannell and Sons.

**CHRYSANTHEMUM MODESTO** (Japanese reflexed).—A deep golden yellow, very full, of extra quality and substance. From Messrs. Cannell and Sons.

**CHRYSANTHEMUM LADY BYRON** (Japanese incurved).—Another white variety, but not remarkably pure. The petals are short and of considerable breadth. From Messrs. Cannell and Sons and Mr. Wells, Earlswood, Redhill.

**CHRYSANTHEMUM SUNSTONE** (Japanese large flowered).—A lovely variety, in colour a pale primrose-yellow, very full and of excellent form. From Mr. Wells.

**CHRYSANTHEMUM ROBERT POWELL** (Japanese large flowered).—A variety of pleasing shades of colour, golden bronze and yellow predominating. From Mr. Wells and Messrs. Cannell and Sons.

**CHRYSANTHEMUM N.C.S. JUBILEE** (Japanese incurved).—A ridiculous name, to say the least, to give to a flower. In colour this is a distinct shade of mauve, large and full. From Messrs. Cannell and Sons and Mr. Wells.

**CHRYSANTHEMUM LADY HANHAM** (Japanese large flowered).—A pleasing variety in which the prevailing tints are golden, with a suffusion of rosy shades. From Messrs. J. Veitch and Sons and Mr. Wells.

**CHRYSANTHEMUM G. F. WARREN** (Japanese large flowered).—A sport from Mme. Carnot of a pleasing shade of pale lemon-yellow. From Mr. W. Wells.

**GESNERA AMABILIS**.—A profuse flowering species, each plant bearing a dense head of bloom, the colour, a pale lemon-yellow, contrasting well with the dark bronzy-green leafage. (In "Dictionary of Gardening" this plant will be found under the name of *Negelia multiflora*). From the Duke of Sutherland, Trentham (gardener, Mr. P. Blair).

**NERINE LADY LAWRENCE**.—A charming variety, which under the light at the committee table appeared to be of a clear orange shade, but upon closer inspection a salmon tint prevailed. It is a very distinct colour in any case and a decided acquisition (as are all those kinds which follow). From Mr. Elwes, Colesborne, Andoversford, Gloucester.

**NERINE LADY MARY SHELLEY**.—A clear flesh colour, singularly handsome and distinct, the truss large. From Mr. Elwes.

**NERINE LADY BROMLEY**, in which the colour is carmine-rose, with a lilac-purple stripe up each segment, a most remarkable and unique variety. From Mr. Elwes.

**NERINE LADY LLEWELLYN**.—A dark carmine, suffused with cerise, the truss large and the segments broad. From Mr. Elwes.

**NERINE LADY MARY HICKS-BEACH**.—A vinous-crimson, rich in colour and the truss large. From Mr. Elwes.

**NERINE DONNINGTON**.—A pale blush, with a pale pink and a deep pink line up each segment, a charming mixture of soft colours. From Mr. Elwes.

**NERINE COUNTESS BATHURST**.—A pale blush-pink, with soft rosy lines, very distinct and handsome. From Mr. Elwes.

Numerous large groups of *Chrysanthemums* were staged, and collections of cut blooms were also very plentiful. Of the groups, perhaps the finest and largest came from Messrs. Veitch and Sons, Chelsea. It consisted of remarkably sturdy plants, with large, finely-developed flowers and rich clean foliage. The colours, too, were exceedingly well marked and bright, considering that the season is yet very young. The arrangement was in the orthodox style, semi-circular in form, and well calculated to display the blooms to the greatest advantage. Many popular and standard varieties were well represented, the following being among the best: Vivian Morel, well coloured and of good form; its lovely sport, Chas. Davis, which is almost without a rival among the bronze-yellows; William Fyfe, large and graceful blooms; Pride of Madford, a lovely combination of purple and mauve; Mutual Friend, a graceful white of excellent substance; and William Seward, the richest of dark reds. This excellent group was awarded a silver Banksian medal. A somewhat similar exhibit, and containing specimens of the pompon and incurved sections, was staged by Mr. W. Wells, Redhill, Surrey. The Japanese varieties were, however, the most striking. Three magnificent blooms of Thomas Wilkins, the fine and shapely dull yellow variety sent out by Mr. Owen three years ago, attracted considerable attention by reason of their size. Mrs. J. Lewis, one of the grandest whites, was equally well shown. Other notable things were Piedmont, a well-formed variety of a charming shade of pink, and raised by the King of Italy's gardener; Edith Tabor, a very bright clear yellow, with thick curled petals; Mrs. G. W. Palmer, a curious and very striking flower of great size, the colour shading from bronze to dull red, the centre petals being almost straight and the outer ones tightly curled. Lady Hanham, a very pleasing creamy flesh-tinted bloom, and Nellie Brown, an effective and free-blooming *Chrysanthemum*, bronze-yellow in colour, a sport from Rycroft Glory, were also shown (silver-gilt Banksian medal). A smaller group of *Chrysanthemums* in pots was shown by Mr. T. S. Ware, Tottenham. It was a pretty group, but the blooms were imperfectly developed (silver Banksian medal). A superb collection of cut *Chrysanthemum* flowers came from Mr. W. J. Godfrey, Exmouth, Devon, containing upwards of 150 huge Japanese blooms of remarkably even quality, and equally striking for their excellence of form and colour. A few of the best were Royal Standard, brilliant crimson; Simplicity, a graceful and very pure white; Mons. Delamotte, one of the brightest of golden yellows; Lady Ridgway, a very substantial bloom of a ruddy bronze hue; Maggie Shea, a pretty bright lemon-yellow, with the reverse of its petals of a lighter tint; Pride of Madford, Modesto, a dazzling yellow; Ethel Tabor and Ella Curtis. A pleasing and tastefully arranged collection of cut *Chrysanthemum* blooms came from Mr. Wythes, gardener to Earl Percy, Syon House, Brentford. The flowers were generally arranged in bunches of three, each variety separate, the groundwork being Maiden-hair

Fern. The following were among the best: M. Ch. Molin, Amos Perry, G. C. Schwab, Reine d'Angleterre, Etoile de Lyon, Edw. Molyneux, W. H. Fowler, and Stanstead Whit, all varieties of good standing and too well known to need detailed description (silver Banksian). Another good collection of cut *Chrysanthemum* came from Messrs. Cannell and Sons, Swanley. The best were William Seward, Lady Byron, particularly good form, M. C. Andre, well-coloured blooms of Mme. G. Bruant, Dorothy Seward, shapely and handsome bronze; charming flower of Chas. Davis, and exceptionally fine one of Robert Powell and Lady Hanham. From the same exhibitors came a collection of very delightful single *Chrysanthemums*, containing good examples of Mrs. Glyn, a pretty deep rose; Blanc Chapman, a large light pink, and Rose Pink, very beautiful sort. These single forms can be too highly recommended for decorative purposes. Nothing could be more graceful for vases, with their lasting properties are admirable (silver Banksian medal). Mr. W. Fyfe, gardener, Lord Wantage, Lockinge Park, exhibited a collection of seedling Sunflowers of good form a substance, admirably arranged in large bunch and making a fine show. An artistically arranged group of miscellaneous plants was staged by Messrs. Cutbush and Son, Highgate. The floral element was supplied by Begonia Gloire de Lorraine, Carnations and some very pretty Heat with a few Japanese *Chrysanthemums* (silver Banksian medal). Messrs. John Laing and Sons were represented by a group of decorative a fine-foliaged plants, with a few *Chrysanthemums*. *Dracena Goldianna*, a collection of richly-coloured *Bertolonias*, *Saxifraga sarmentosa* tricolor superba, and some brightly-coloured *Crocus* were notable (silver Flora medal). An exhibit of great beauty, consisting of Begonia Gloire de Lorraine and *Adiantums*, was staged by Mr. H. B. May, of Upper Edmonton. The Begonia were all superbly grown plants, bushy and symmetrical, the contrast between their bright blossoms and the vivid green of their foliage being delightful. The softening effect of the *Adiantums* was most pleasing (silver Flora medal).

Of exceptional merit was a collection of cut seedling *Nerines* from Mr. H. J. Elwes, Colesborne, Andoversford, Gloucestershire. Their range of colour was remarkably varied, and the tints were throughout of great brilliance and purity. The named varieties included five specimens: *N. amabilis*, *N. excellens*, *N. rosea crispata*, *N. dulata*, *N. Fothergilli*, *N. Novelty* and *N. flexa* (silver Flora medal). Messrs. J. Veitch and Sons had a collection of plants of their beautiful javanico-jasminiflorum hybrid *Rhododendron* and a box of small plants of Begonia Gloire de Lorraine; also a plant of Begonia Mrs. Heath garden hybrid of excellent habit, and bearing a large quantity of pleasing flowers. Messrs. W. Paul and Son, Watlington Cross, staged an extensive exhibit of cut Roses admirable for the season. Marie van Houtte, La France, Marquise Salisbury, Mrs. John Laing, Gloire de Dijon and Enchantress were among the best varieties shown (silver-gilt Banksian). Bushy and free-flowing plants of a lovely creamy white Gesnera were shown by Mr. Blair, gardener to the Duke of Sutherland, Trentham, Staffordshire. A silver Banksian medal went to Miss Emmet for some marvellously clever models of flowers. Orchids and Virginia Creeper leaves were among the specimens shown, and they could hardly be distinguished from natural examples.

#### Fruit Committee.

This was one of the best meetings of the year. Not only were the exhibits greater in number, but the quality was excellent. There were some very fine collections of hardy fruit and excellent vegetables.

Awards of merit were given to:—

**MELON EXCELSIOR**, a very handsome medium-sized fruit, skin golden, much netted, with scanty flesh of great depth and richly flavoured. It is a seedling between Beauty of Syon and Syon House

om Mr. G. Wythes, Syon House Gardens, Kentford.

**GRAPE MARCHIONESS OF DOWNSHIRE** a large white berry, not unlike Muscat of Alexandria in force, but when grown in a cool house the berries and bunch are much larger and of a duller tinge; skin thick, flesh sweet and refreshing. It is a seedling between Muscat of Alexandria and white Gros Colman. From Mr. Thos. Bradshaw, gardener to the Marquis of Downshire, Hillsborough Castle, co. Down, Ireland.

**TURNIP GOLDEN BALL**, a beautifully shaped Turnip, with very small tap-root, colour light golden. It is an excellent winter variety, the quality being first-rate. From Messrs. Dobbie and Co., Rothburgh, and Orpington, Kent.

**TURNIP WHITE MODEL**, a white variety of a beautiful shape. From Messrs. Dobbie.

One of the best collections of Grapes seen of late years at these meetings was that sent by Mr. C. A. Meyer, Forest Hill (gardener, Mr. W. Taylor). Thirteen varieties were staged, and most of them first-rate finish. Muscat of Alexandria and white Pincee were exceptionally good; Alicante was large and beautifully coloured; Lady Downe's, Gros Maroc, Gros Colman, Gros Guillaume and other kinds were also excellent, well meriting the ever-gilt Knightian medal awarded. Messrs. J. King & Sons, Forest Hill, S.E., staged 100 dishes Apples and Pears. Of the Apples, Sandringham, Alexander, Loddington, Peasgood's Nonsuch, Reinheim, Hollandbury and Lane's Prince Albert were good. We have seen larger Pears, but the quality was good. There were excellent Doyenné du Comice, Nouvelle Fulvie, Beurré Baltet père, and other Beurré and large stewing kinds, the whole collection being nicely arranged with small plants (ever-gilt Knightian medal). A collection equal in quality to the last-named, also 100 dishes, was sent from Messrs. Cheal and Sons, Crawley. The dishes were splendidly coloured. Mère de Ménage, Peasgood's Nonsuch, Bismarck, Alexander, Cox's Pomona, Lord Derby, Bess Pool, and Warner's King were noticeable for size. The best Pears were Duchesse d'Angoulême, General Tottleben, Nouvelle Fulvie, Hôu Moreceau, Pitmaston, Grandpère and Doyenné du Comice (silver-gilt Knightian medal). Messrs. Cannell and Sons sent a collection of vegetables, mostly onions. Most noticeable were The Reading, Red Glands, and the Scotch. Anglo-Spanish, Ailsa Craig, Wroxton Improved, and Cannell's Mammoth. Leeks, Autumn Giant Cauliflowers, Carrots, Beetroots, and Potatoes were also sent (silver Knightian medal). Messrs. Carter and Co., High Holborn, sent a collection in variety, both Turnip and long-topped. The Crimson Ball Turnip-rooted was excellent. A few of the others were a trifle large. There were also very fine Carrots (bronze Knightian medal). Messrs. Dobbie and Co., Rothburgh, N.B., had some splendid stocks of Turnips, very large Turnips, and Kales in variety. An Apple from Mr. G. Dyke, Stubton Hall Gardens, Newark-on-Trent, was asked to be sent to March to test its keeping properties. Mr. B. Wright, Lyndon, Oakham, sent an Apple, a seedling from Wellington. These the committee reserved for a later meeting. Mr. Ross, Newbury, sent a Pear named Popham. The Pear was good, but at this season we have many Pears of equal merit. A seedling Apple, recommended as a market fruit, came from Mr. Beale, Shoreham, but it lacked quality. From Messrs. Gareia and Co., Covent Garden, W.C., came three cases of fruit, mostly Pears, from California; the fruits were in excellent condition and of large size. The flavour of Doyenné du Comice, Beurré Clairgeau, Winter Nelis and others was first-rate; one or two varieties were not ripe. Mr. Cook, Forde Abbey Gardens, Chard, sent Golden Drop and Late Red Plums, also a dish of Tomatoes. Messrs. Barr, King Street, Covent Garden, sent the Persian Melon. Mr. Outram, Oakham, sent a fine dish of Medlars, and Mr. Hart, Audley End Gardens, Saffron Walden, exhibited Potato Diamond Jubilee. This has been tried at Chiswick, and was an excellent cropper. It was decided to test its cooking properties.

The Veitch prizes for flavour brought forth seven dishes of Apples and eight of Pears, the premier award for Pears going to Mr. Powell, Hsington Gardens, Dorchester, for a grand dish of Doyenné du Comice—Emile d'Heyst, from Mr. Woodward, Barham Court, Maidstone, being a good second. Marie Louise and Beurré Superfin were likewise staged. For Apples, Mr. Herrin was first with Cox's Orange, nice fruits and just ripe, Mr. Woodward being second with American Mother. Other kinds shown were Ribston and King of the Pippins.

**Victoria Medals of Honour.**—The Victoria Medals of Honour granted by the Royal Horticultural Society in honour of the Queen's Jubilee reign were distributed by Sir Trevor Lawrence the afternoon of the meeting. Previous to the distribution the recipients of the honour (whose names will be found in our issue of July 10, p. 32) as well as some friends were entertained at luncheon in the Windsor Hotel, Victoria Street, Westminster, Sir Trevor Lawrence in the chair.

## NOTES OF THE WEEK.

**Rose La France** is still very fine in some gardens, a fact amply illustrated at the Drill Hall this week, when Messrs. W. Paul and Son, Waltham Cross, brought a lovely gathering of its handsome blossoms.

**Helianthus orgyalis.**—The tall slender plums of this fine perennial are among the most graceful things in the border at the present moment, and on the grass, where plants have stood for years, it is distinct and beautiful.

**Chrysanthemum Crimson Queen.**—We have in this fine variety a medium or perhaps small Japanese kind with flowers of a dark crimson hue and very freely produced. It is a gem in its way, being bushy and scarcely 2 feet high.

**Violet Princess of Wales** is undoubtedly a very fine acquisition to this family, the flowers being of the largest size, rich in colour, and delightfully fragrant. The ample leafage and long stems that obtain in this variety render it all the more valuable.

**Helenium nudiflorum** is still flowering with some freedom. The warm tone of colouring in this plant and the free-branching character generally are of especial value in the garden, while its long-continued season of flowering cannot well be over-estimated.

**Nerine flexuosa excellens.**—A very striking and beautiful variety, with heads of blossoms of a bright rosy-pink shade and a dark carmine rib in the middle of the reflexing segments. It is rather dwarf when compared with some kinds, and noteworthy for its free-flowering.

**A note from Dublin.**—Autumn tints are lovely just now. Acer colchicum, A. japonicum, Quercus coccinea, Liquidambar, Euonymus europæus and Berberis Thunbergii are amongst the most attractive at present. Vitis Coignetiae is lovely.—F. W. Moore, Glasnevin.

**Chrysanthemum Modesto.**—For richness of colouring, as well as for its size and fine petal, this handsome kind is, perhaps, unique. Many kinds have flowers of a deep yellow shade, but in the intense rich gold and glistening petals there is a richness of tone that is very rare.

**Rose Enchantress.**—This valuable and ever-flowering Rose was shown at the Drill Hall on Tuesday last by Messrs. W. Paul and Son. Judging by the delicate and lovely shade of the blossoms and the number of prominent buds, it is an ideal Rose for decoration or for cutting.

**Carnation Mme. d'Albertina.**—While possessing a fine constitution and the shade that is usually so eagerly sought after among winter Carnations, this kind appears to be wanting in general beauty and refinement. The pink shade, moreover, is somewhat cloudy in tone.

**Arnebia echioides.**—This interesting rock plant is still producing its spikes of yellow dark-spotted flowers; and in some large clumps noted quite recently this is the third crop of flower-spikes this year, the first appearing quite early in spring, and the last in the closing days of October.

**Nerine crispa.**—Among a large number of beautiful and showy forms this frail kind is interest-

ing and pretty where several bulbs are grown in one pot. Less showy it may be than most, yet it is not without its attractive side when the more highly-coloured varieties are not so much in evidence.

**Chrysanthemum Amos Perry.**—At the Royal Horticultural Society's meeting on Tuesday last Mr. Geo. Wythes, Syon House Gardens, set up a splendid lot of well-grown flowers of the above. It is a fine yellow flower, occupying a very conspicuous place by reason of the richness of the blossoms.

**Chrysanthemum Nellie Brown.**—This is said to be a sport from the well-known Ryecroft Glory, and the flowers, which are of a bronze shade, are very effective. On Tuesday last Mr. Wells exhibited its blooms cut from the open. It is of a pleasing shade, each blossom about 3 inches across.

**Phyllocactus anguliger.**—A very distinct Mexican species with satiny-white flowers and yellowish sepals that expand in the daytime, when the blossoms emit a powerful fragrance. The deeply-angled stems are very distinct, as are also the blunt triangular divisions that form the lobes. This species is now in flower at Kew.

**Chrysanthemum Queen of the Earlies.**—A variety of considerable promise among October-flowering Chrysanthemums, though scarcely early enough in an ordinary season. Quite recently at Long Ditton, however, it was doing well in the open ground, and at the Drill Hall this week it was also shown well. The colour is creamy white, with pale green centre.

**Delphinium in autumn.**—While we have many shades of blue and lilac in the perennial Aester family, the late spikes of these showy plants are still welcome now flowers are scarce in the open borders. These late spikes being but the product of a second flowering are of course smaller, but where the large clumps flowered in June a fair percentage has been producing good spikes for some weeks, and still a few remain.

**Heterocentron roseum.**—A pretty free-flowering sub-shrubby plant, well suited for the greenhouse when well grown in pots. The pretty rose-coloured blossoms are produced in considerable numbers in large terminal panicles, that keep up a succession of flowers for a long time. In the greenhouse in autumn and winter it is very attractive. Equally so are older bushes when planted in the open ground for summer flowering.

**Lithospermum tinctorium.**—This rare, and in some gardens fastidious, species was beautifully in flower a day or two since at Winchmore Hill, the intense blue flowers attracting immediate attention. The plant is growing here with more than ordinary vigour, a fact we are pleased to note, while the prolonged flowering of this lovely species will assuredly arouse interest among the lovers of hardy plants. We never before remember this species flowering so long and so profusely.

**Rose Souvenir de la Malmaison.**—Some old bushes of this grand autumn favourite are providing splendid blossoms, and during the past few weeks it has been one of the gayest of Roses in the garden. Large, full, and handsome, as well as free-flowering and beautiful in its shade of colour, it is little wonder so fine a variety is so generally appreciated. It is certainly not a good summer Rose, but few Roses can compare with this one so late in the year when the majority are past and gone.

**Ixora macrothyrsa.**—This is, perhaps, one of the most stately and vivid of this lovely genus of stove flowering shrubs. Some large examples that are now flowering in the Victoria house at Kew display the fine heads to advantage. The plants are naturally grown, and as a result produce immense heads of the richly-coloured blossoms. The flowers are brilliant reddish scarlet, verging to crimson in the oldest flowers. The foliage, too, is abundant and of large size, and, all in all, it is one of the most valuable of the Ixoras.

**Hardy Crinum.**—Mr. Moore, of the Royal Botanic Gardens, Glasnevin, writing to us regarding the Crinum that he finds hardy, says: "I have tried a great many Crinums with varying results, but in the end those that flower well each year reduce themselves to C. capense, C. e. album, C. Powellii, C. P. album, C. Moorei, C. M. album,

C. scabrum, C. amabile, C. lineare, C. pratense, and C. yennense. With these you have a first-rate selection. The last three I am delighted with. C. pratense was especially fine; flowers pure white, very numerous, and with great substance."

**Flowers from Weybridge.**—I bring you up a few late flowers, half a dozen of Marliac's Water Lilies, some Primroses and Gentians. These have flowered well with me owing to the absence of hard frosts. The Liquidambar has coloured so well this season, that I think it worth bringing you a few sprigs.—GEORGE F. WILSON.

\*.\* A rich gathering of these beautiful flowers, the shades of colour in the Primroses being very varied and bright. The Liquidambar leaves were exceedingly rich in colour, and a large specimen with the sun shining full on the leaves is a beautiful object in the landscape now that the flowering plants are on the wane. The autumn tints this year seem to be very bright.—Ed.

**Hybrid Nerines.**—From Andoversford Mr. Elwes brought a remarkable series of these plants to the Royal Horticultural Society this week, when seven out of eight varieties sent up for certificate received this distinction. Brilliance of colour in the self kinds was remarkable, particularly the clear salmony orange of Lady Lawrence and the intense carmine-scarlet hue of Lady Llewellyn. Other noteworthy kinds are Lady Dorrington (pale pink and white segments somewhat widely separated, and with rich carmine rib), and Lady Mary Shelley (delicate pink, tips of the sepals recurving). Countess of Bathurst is white flushed pink, and having a line of deep pink 1 inch long from the base of the segments. Lady Lucy Hicks-Beach, a crimson-scarlet, is very compact, and Lady Bromley a curious mixture of carmine and purple.

**Begonia gracilis Martiana.**—This very distinct variety is very useful for autumn flowering. I lately saw some nice plants of it in the Oxford Botanic Gardens, and most effective they were among other flowering plants in the conservatory. The plants were in 6-inch pots, and had several erect-growing shoots about 18 inches high, covered with bright rosy-pink flowers. This variety may be propagated from the small bulbils which are formed in the axils of the leaves. These may be kept in a cool, dry place and started early in January, treating them in the same way as seeds. They may be grown in a moderate stove temperature, and should be fully exposed to the light. During the summer they may be grown in the cool conservatory, and with good treatment will keep up a bright display for a long time. Young plants will be more effective if several are grown together in the same pot or pan. A good rich loamy compost should be used for potting, and after the plants begin to flower liquid or artificial manure may be used freely.—A. H.

**Begonia Gloire de Lorraine.**—This was introduced about eight years ago, and a first-class certificate was awarded by the Royal Horticultural Society five years ago. Yet it was not until last autumn that it became generally known. It was raised by V. Lemoine, of Nancy, and is a hybrid between B. Martiana and B. Dregei. A remarkable feature of this variety is that it rarely produces seed vessels. Among some thousands of plants I have found only three perfect female flowers, and I am afraid these will prove abortive. The absence of these may account for its free flowering. I know of no other variety that will produce so much bloom and continue flowering so long. Grown in a temperature of 60° to 70° F. with good treatment, the same plants will continue to flower from now until February. It is of dwarf habit and the soft pale green foliage shows off the bright pink flowers to great advantage. Few flowering plants are more suitable for table decoration than this Begonia. It may be grown under the same treatment as other winter flowering varieties, but requires rather more warmth. The greatest difficulty is to procure good cuttings, the plants becoming exhausted by continual flowering. By care-

ful treatment, however, it is possible to get good cuttings about February; old plants will usually break back from the base, and the short jointed shoots must be taken before they begin to show flower. These will root freely if put into light sandy soil and placed in the stove propagating pit. The plants recently exhibited should fully prove its value as a plant for decoration, yet, I understand, on the Continent where it was raised growers have so far failed with it that it is now almost out of cultivation.—A.

**The weather in West Herts.**—A very warm period, in fact, what is termed a "St. Luke's Summer." On the warmest day, the 17th, the temperature in shade rose to 67°, which is the highest reading recorded here as late in October during the thirteen years over which my observations extend. The previous night also proved singularly warm; indeed, the nights, as a rule, have during the past week been even more unseasonably warm than the days. The temperature of the ground is at the present time about 2° higher than the October average at 2 feet deep, and about 3° higher at 1 foot deep. Rain has fallen on only one day as yet during the present month, but on seven nights. The total measurement, however, amounts to little more than half an inch. For the time of year the ground is remarkably dry: in fact, no measurable quantity of rain-water has come through the heavy soil percolation gauge for eight days. On the 18th, the sun shone brightly for altogether seven hours.—E. M., *Berkhamsted*, October 22.

—Another warm week, but not nearly so warm as the previous one. On the 26th the shade temperature rose to 61°, which is high for the time of year. Both at 1 foot and 2 feet deep the soil is now about a degree warmer than is seasonable. Rain fell during the early morning hours of the 26th, but to the depth of little more than a tenth of an inch. The ground is still very dry for October, no measurable quantity of rain-water having come through either percolation gauge for two days. The wind has been recently very light, the average rate of movement at 30 feet above the ground during the last nine days amounting only to about 3 miles an hour. The record of clear sunshine has been very variable, but taking the week as a whole the mean duration was rather more than three hours a day.—E. M., *Berkhamsted*.

## OBITUARY.

MR. E. J. BAILLIE.

WE regret to announce the death, at the age of forty six, of Mr. E. J. Baillie, F.L.S., at his residence, Woodbine, Upton, shortly after ten o'clock on Monday morning, Oct. 18. Though Mr. Baillie had been ailing for some time, his end has come with tragic suddenness. From a notice of his death in the *Cheshire Courier* we take the following: Deceased was educated at Tarvin, and on leaving school he spent a few years on his father's farm. Rather more than thirty years ago he entered the firm of Messrs. F. and A. Dickson and Sons, seed merchants and nurserymen, Eastgate Street, Chester. He commenced as a junior in the correspondence department, the charge of the department eventually falling to his care and supervision. He was next appointed cashier and confidential adviser of the firm, and afterwards became a partner, and subsequently managing partner of the business. When the two firms of Dicksons were amalgamated, Mr. Baillie became deputy chairman and a managing director of Dicksons Limited.

By Mr. Baillie's death Chester is much the poorer, and his labours on behalf of the Grosvenor Museum will not soon be forgotten. For some years he had acted as honorary secretary and treasurer of that institution.

Cut down in the prime of life and usefulness a blank has been created which it will be difficult to fill. Every work having for its object the raising of the intellectual and social condition of the people found in Mr. Baillie a warm supporter. The cause of temperance has long had in him a consistent advocate. He was Fellow of the Linnean Society, and published some years ago a flora of the district. He was awarded the Kingsley Memorial Medal, and was one of the prime movers in the formation of the Chester Paxton Society, and he initiated the Chester Guild of Arts and Crafts. The citizen have him very largely to thank for the excellent displays of pictures from time to time at the museum, and also for the exhibition opened some months ago by the Duke of Westminster. A Fellow of the Royal Horticultural Society, Mr. Baillie on several occasions lectured before this body, while articles on fruit culture frequently appeared from his pen in various publications, and he was an enthusiastic vegetable grower. Mr. Baillie was a clever artist, having a remarkable facility for transferring facts and striking bits of scenery to paper, which he was also a good shorthand writer. Articles from his pen on subjects connected with agriculture and horticulture often appeared in music he took a keen delight, and was a performer of no mean order. A willing and a liberal helper of every good cause, a true friend and a delightful companion, faithful to his friends, marked his walk and conversation, and won for him the affection and respect of all with whom he came into contact.

MR. ISAAC DAVIES.

WE regret to announce the death, at the age of 85, of Mr. Isaac Davies, which took place at the Brook Lane Nursery, Ormskirk, on the 10th in the morning. Up to within two months of his death he conducted his business in every detail. Mr. Davies raised many good Pelargoniums and Calceolarias, as also Azaleas and Rhododendrons, Rhododendron *præcox* being one of his earliest attainments. Azalea *Daviesi* and A. *Avalanche* were also raised by him. He also turned his attention to sweet-scented Rhododendrons, and gave us Countess Derby, Countess of Sefton, Lady Skelmersdale, Duchess of Sutherland, Miss Davies, and Miss Jas. Shawe. The hardy Rhododendrons were also taken in hand, and to this class many fine varieties were added. He has no doubt left the world richer by his enterprise, and has contributed in no small degree to the pleasure of those who take an interest in their gardens.

The business, which was first started at Wavertree, near Liverpool, and removed to Ormskirk thirty-one years ago, now comes to an end, the stock having been disposed of at a sale by auction the end of September last.

## PUBLIC GARDENS.

**The Churchyard Bottom Wood, Highgate.**—At a recent meeting the Islington Vestry decided to subscribe £2000 towards the purchase of the Churchyard Bottom Wood, Highgate, provided that the balance of the purchase-money £23,000—is otherwise subscribed. It was decided to apply to the London County Council for a loan of the sum named being obtained on loan.

**Names of plants.**—*F. Tomlin.*—*Eriobotrya japonica* (the Loquat).—*Richard Butler.*—Not all uncommon.—*Arthur P. Nix.*—*Cestrum aurantiacum.*—*W. G.*—1, *Woodwardia radicans*; 2, *Asplenium viviparum*; 3, *Paulinia* sp.; 4, *Sedum* sp.; 5, *Sedum japonicum*; 6, *Tradescantia zebrina*; 6, *Solidago ambigua*; 8, *Veronica salicifolia.*—*Spring Hill.*—1, the colour you speak of is not unusual; 2, *Mitella cuneata*; 3, impossible to name from such a scrap.

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## ORCHARD AND FRUIT GARDEN.

### SCARCE APPLES AT THE CRYSTAL PALACE SHOW.

BECAUSE a few classes did not fill well it must be taken for granted that the Apples are worthless kinds. I admit they may lack the popularity of some kinds for exhibition, but I think, in judging, more points may with advantage be given to quality. If we take that soft Apple Lord Suffield, a fairly popular show kind, it cannot be termed a good all-round variety, as in some places it soon spots and is useless for keeping. Golden Spire, which finds its favour as an exhibition fruit, is a better keeper, less tender, and a more regular cropper. I am aware Lord Suffield is a great favourite in my gardens, but in damp, heavy soil the tree is tender. It succeeds in light, warm soil, but Golden Spire is not fastidious as to soil, bears freely every year, and, though fit for use in September, keeps good till December. I have never known it to fail even in the worst of seasons. The dish of this variety shown by Mr. Woodward at the Palace show was very fine. One object to its shape. I do not think it so valuable as Lord Derby and many others. Another Apple I was surprised to see only one of which was Royal Jubilee. Why this excellent Apple is not more grown I cannot imagine. I noticed it was prominent in collections. It is a very distinct fruit, large, and of a clear lemon colour. It always crops. What makes it more valuable is its late flowering. Seaton House, another kitchen variety, was none too plentiful. It is a handsome fruit, late, and valuable for small gardens. This crops so well in bush form, that I was surprised to see it so poorly shown. I have seen grand crops of this variety in the southern parts of the country, and in a few places it is used for dessert, though, of course, late in the year. Another variety, Horstead's Pearmain, a very handsome Apple, was only shown by two exhibitors. It is an excellent

variety, and in the west of England was much valued for its regular cropping and good keeping. Spencer's Favourite, a pretty Apple of the Golden Noble type, was poorly shown as regards numbers. It is an Apple of great merit on account of its close growth and cropping so abundantly as an orchard tree. This is well suited for small gardens. Bramley's Seedling was only poorly staged as regards numbers, four competing. This excellent cooking Apple is a great favourite in the north on account of its vigorous growth, late keeping, size, and free bearing. I think Grenadier may with advantage be left out, as though an early and free bearer, this and Lord Grosvenor are so much alike that one of the two would suffice. I would like to see classes for Lady Henniker, an excellent Apple; Mrs. Barron, a fine variety for autumn use and a compact grower, and Waltham Abbey Seedling, a grand cropper on old trees. There are others which could be named as none too plentiful, but I will now briefly refer to the

### DESSERT KINDS.

First comes Allen's Everlasting. Of this only three dishes were staged. In the Thames valley I have seen grand crops of this variety, and I should regret seeing its place taken by other kinds. Such kinds as this which keep till May are of great value to the private grower. I admit it is not a showy fruit, but the Royal Horticultural Society will do well to include varieties which keep well. The quality of this is superior to that of many during the spring months, and it is a good cropper in most seasons. I notice this is not a good Russet year. Though Egremont Russet was only shown by two exhibitors from the Maidstone district, it is one of the best of its class, and I think anyone who objects to it will not do so if he compares its quality next December with that of other Russets. It usually bears freely. Mabbot's Pearmain appears to be scarce this year, but it is a handsome Apple and a great bearer in many parts of the country and of first quality. I was

surprised to see only two dishes staged. This is not a taking fruit, and unless its quality is known its appearance does not tell when placed alongside larger and more highly coloured fruits. Much the same remarks may be made concerning Mannington Pearmain in season with Mabbot's. This was more plentiful certainly, but with me it is less reliable. The quality is first-rate. Scarlet Nonpareil was fairly well shown. It is a most useful dessert variety. I am pleased to see these classes for late fruits recognised by the society, as though they may not make much show they have their value for dessert when softer and brighter-coloured fruits are past. A variety less shown than any was Williams' Favourite, an American variety, a handsome conical fruit of a rich red colour and a pleasant flavour. This is not so well known as it deserves, and doubtless will become a favourite. At the first show four years ago several kinds like those named above were not shown, but they have now come to the front and are largely staged.

G. WYTHES.

**Pear Comte de Lamy.**—This deliciously-flavoured, though small Pear has been in perfection during the past ten days, the fruits having been grown on upright cordon trees on the Quince stock. The fruits produced by such trees are perhaps a trifle smaller when compared with those gathered from bush trees, but in my opinion they are more highly flavoured. Pears of good quality being plentiful during October and November, two or three cordon trees of this variety would yield as many fruits as would be required for ordinary private consumption, or as many as could be consumed while in good condition. If wanted in bulk the best way would be to grow the trees either as bushes or standards, as it is a vigorous-growing, hardy, free-bearing variety.—A. W.

**Apple James Grieve.**—Those who are anxious to make a selection of the best dessert Apples would not be disappointed if they added this variety to their collection. "G. W." drew attention to it on page 316. I have recently seen it fruiting very freely in the north of

Scotland. The trees were small, but each was carrying a heavy crop of large clean fruit, and though there were many other varieties in the same plantation, none equalled this one for free cropping. I predict there is a good future for this Apple, but good as its qualities are I can hardly follow "G. W." in saying it resembles Cox's Orange Pippin either in appearance or flavour. I should say it is at its best during October, and fruit eaten direct from the trees was most refreshing.—RICHARD PARKER.

**Plum Reine Claude de Bavay.**—This excellent late Gage Plum deserves wall culture, when the fruits produced amply repay the grower for the extra trouble taken in the training by their extra large size. In addition to this, as they will hang late, they can then be the more easily protected from flies and wasps when grown against a wall. The skins should be slightly shrivelled before the fruits are gathered, when they are perfect sweetmeats and highly prized for dessert. It is also much valued for cooking and but little sugar is required. In colour the fruits resemble the ordinary Green Gage, but are much larger, while the tree is also a more vigorous grower. Regarding its cropping qualities, it is about on a par with the variety just quoted, and is a consistent bearer. On account of its being inclined to be a strong grower, a little root-lifting is necessary to induce fruitfulness, but once it commences to bear no further trouble need be apprehended.—A. W.

**Pear Beurre Baltet pere.**—This useful Pear is not grown so much as it deserves, as when grown in various positions it will give good fruits up to the end of the year. There are few Pears of better quality, the flesh being melting, juicy, and richly flavoured. I have this variety in bush form and as a cordon, and only in the latter form as fruiting trees. Anyone who does not know this variety and sees it growing would at first sight take it for a stewing Pear of the Bellissime d'Hiver type. Though a large fruit, it is a free bearer and its large turbinate fruits are handsome. They should be left as long on the trees as possible. On the Quince this Pear does not make a strong growth, and this is important in gardens limited in size. It produces fruiting spurs abundantly and promises to make a compact pyramid. This, with its free bearing and late keeping, should commend it to Pear growers. I find it does well on an east wall.—G. WYTHES.

#### OCTOBER WEATHER AND FRUIT TREES.

If a fine autumn has anything to do with the ripening of the wood on fruit trees, after the present one it should be thoroughly matured, as we have an exceptional one this season. Often these fine autumns are the forerunners of hard winters. Let us look back to 1879, which was the nearest approach to the present, that being the driest October on record, there having during that month fallen only .77 of an inch of rain. Most of us remember the winter of 1879-80 and the injury that was done to trees and shrubs. The year 1879 was wet throughout, for up to the end of October there had fallen 30.70 inches of rain, while during this year there have only fallen 24.04 inches, or a difference of more than 4½ inches. Never do I remember the colouring of the Pear leaves being so beautiful. It is not one variety alone that has assumed these glorious tints, but many of them, more especially those on south-east walls. The foliage of Napoleon is almost a vermilion-crimson, and that of Marie Louise and Duchesse de Mouchy is almost as bright. Plums on most walls have ripened well, the leaves being of a beautiful golden colour, while Cherries have assumed tints that I have never before seen, some of the leaves being almost scarlet. This no doubt is owing to there being no frost to check the flow of sap and the bright sunshine we have experienced during the greater part of the month. So far—and we have reached the 25th of October—there has only been .27 of an inch of rainfall, and were it not that we

had a very wet day at the end of September, there would not have been half an inch for the last six weeks. While there is time it will be well to make some provision in case severe weather should suddenly set in. There are many things that, though fairly hardy, would be all the better with a little protection. Those who contemplate planting ought to get the work done as soon as possible that the soil may settle round the roots. The ground should also be mulched to keep out the frost, and so assist the trees to resist the cold. Figs in the open are almost sure to suffer unless removed from the walls and covered, and the same applies to the more tender plants. H. C. P.

#### THE GRAPE ROOM.

As the time is near at hand when this most useful adjunct to gardens, where Grape growing is carried on to any extent, will be required, steps should at once be taken to put it in order. Washing of all woodwork and the lime-whiting of ceilings, when lath and plaster take the place of match-boarding, will be the first to claim attention. If by chance any repairs should be necessary, these must be done, but these, when possible, are best seen to during the summer months, particularly if bricks and mortar or new plaster have to be made use of, as the materials then have several months in which to dry. The cleaning and refilling of bottles should be done while the room is being cleaned, and after placing a few small pieces of charcoal in each, they may be placed in position in the racks. The outside of each bottle should be wiped perfectly dry before taking it into the room, and if filled nearly full of water, which will allow for a slight waste by evaporation, they will then be in readiness when the Grapes are cut and brought in later on to be bottled. When all this has been done, the room should be dried as thoroughly as possible by opening the windows or ventilators, as the case may be, also by drawing the valve, if heated by hot-water pipes, so that a current of warm, dry air may be continually passing through the building. It is essential that all moisture be dried out beforehand, for the Grapes keep badly in a damp, stagnant atmosphere, and if this is not done and fire-heat be used to counteract it after bottling the Grapes, there is a danger of going to the extreme by the employment of too much heat, which causes shrivelling of the berries. Once the bunches of Grapes with the portions of laterals attached are severed from the Vines and inserted in the bottles, they keep best when subjected to a cool, but dry atmosphere, or when the temperature does not fall below 45° nor rise higher than 50°. By this it will be seen that if all damp has been dispelled, and the building is in a thoroughly dry state when the Grapes are taken in, but little artificial warmth is required, and then in a general way only sufficient to keep the temperature from falling to too low a point when the mercury is at or below freezing point outdoors. Grapes, unlike Apples and Pears, do not throw off moisture, there is therefore no danger of the atmosphere becoming charged with it; consequently the room if in a dry condition at the outset will remain so with the aid of but little artificial warmth. Some gardeners fill up what little space remains in the necks of the bottles after the pieces of wood are inserted with plugs of cotton wool or dry Moss, acting under the assumption that this prevents evaporation and the escape of moisture. After a trial spread over several seasons, I found neither good nor harm result from the practice, and have discontinued it. In the cool, steady temperature mentioned above the water wastes but very slowly. For

the refilling of the bottles with water, nothing better can be used than a can with a long curved spout, such as is sold for filling petroleum lamps with. This holds about a quart of water, and the end of the spout being small, can be easily inserted in the neck of the bottle, and the necessary quantity of water run in without a drop being spilt on the floor or by having to withdraw the bunch. A fine bright day should if possible be selected for bottling, and it is best done in the forenoon when the outside air is comparatively dry. The bunches should be cut with as much wood attached as can safely be spared. A. W.

**Pear Beurre Bachelier.**—I was interested "J. C.'s" note upon this Pear on page 315. My friend had a large crop of this variety last year and gave me two to eat. One was very good and buttery, something like a Glou Morceau; but the other, which ripened a week or so later, was little better than a Turnip. I was so pleased with the first one that I ordered two trees of it, but a doubtful after eating the second fruit if it were wise to plant it. Can "J. C." explain this, has he experienced the same difference?—B. ADAM Birkdale, Southport.

**Apple King of the Pippins.**—This Apple is very variable, many seedling varieties being sent out from nurseries under the name of King of the Pippins. Not only do they vary in size and shape and colour, but also in flavour. Some are really useless, while the true kind is a pleasant though not richly flavoured Apple. It has cropped well in several gardens this year, and will be useful in this scarce season. Some very fine fruit of it I noted recently at Boxted Hall from espalier trees, under which system it thrives better than most kinds.—R.

**Pear Gansel's Bergamot.**—This Pear is very free bearer and of fair quality, the flavour being much liked by some. It is usually a little gritty, but the flesh has a buttery, rich taste and is very deep. In shape the fruits are short and much flattened, yellowish, rough brownish on the side nearest the sun. I recently noted a nice lot of fruit of this variety at Ickworth, where it does well and crops so freely that it is necessary to thin somewhat heavily in order to get good fruits. It seems to thrive under almost any description of training, and should be grafted on the Quince.—R.

**Pear Passe Colmar.**—In most places this Pear is of good quality, but the best fruit, as a rule, comes from a warm soil where the tree is grown on an east aspect. The fruits are of medium size, true Pear shape, green at first dotted with brown, changing afterwards to a deep lemon-yellow. Its season is from now onwards until the middle of December, and where there are trees on different aspects this succession may easily be kept up. The flesh is of a deep yellowish tint, very juicy and melting. On dwarf bushes or pyramids in the open it is a fine variety, bearing very freely, and the tree is very vigorous.

**Pear Van Mons Leon Leclerc.**—I have been in several places where complaints of the character of this fine Pear were common, and possibly it can hardly be recommended to anyone having a very heavy cold soil. But on medium soils if the roots are kept up and the branches properly thinned, it will usually be satisfactory. Where room can be found on a wall for it the fruit will be of very fine quality, large and handsome, while if judiciously managed, it will be abundantly produced. The flavour is quite distinct from that of any other Pear, and its handsome appearance is always noticed.—B. S.

**Apple Tower of Glamis.**—There are few more profitable Apples to grow than this when it is obtained true to name and well cultivated. Unfortunately, it is not always supplied true, and some nice young trees I met with recently

had been supplied from a well-known nursery we bearing a full crop of a large, flattish red Ale, quite different from Tower of Glamis, which at no time is very highly coloured. It is a local, angular-looking fruit, lightly streaked with red on a pale green skin, the flesh as white as snow, and of that firm, juicy texture that is met in September, and yet will keep well into the new year.—GROWER.

**Apple Cox's Orange.**—The crop of this fine dessert kind is very thin in most places this season, but this has had the effect of improving the size of the fruit. In several gardens recently visited I have been struck with the unusually fine colour and appearance of the fruit, and in my own case Cox's Orange was never better as regards size or quality. What a pity it is this fine Apple is so often seen on starved espalier-trained trees, every young wood being spurred back annually. The result is usually a few fruits on the end of the branches and in the centre a thicket of unfruitful wood. Free pyramids or bushes take up more room and are infinitely superior in every way.—GROWER.

THINNING FRUIT CROPS.

Many advantages to be derived from a judicious thinning of most kinds of hardy fruits, when they set too freely, ought to be more generally understood, for if this were so, and growers practised thinning in time, we should see fewer inferior samples on the market. It would seem that in some places most kinds of fruit were scarce this season, yet, owing to so many inferior samples prices have ranged rather low, unless those of superior quality. Black Currants at the time were fetching from 16s. to 20s. per bushel, but many Apples have been sold in this district at as low as 2s. the bushel. This was for small, badly-grown specimens, but for first-class samples as much as 12s. and 15s. have been paid. Now which would be best, may I ask, four bushels of small fruit at 2s., or one bushel of good fruit at 8s. or 10s.? All gardeners pay special attention to thinning Grapes and Peaches in the houses, while those crops outside are left to take their chance. Suppose, for example, all the bunches that showed themselves on a well-ripened Vine were allowed to remain, and none of the berries were removed, all the feeding and attention that could be given them would never produce fine Grapes. If this holds good with Grapes, why not with Apples, Pears, Plums, Peaches, and Nectarines? It is, however, more to the first that I wish to draw attention, because, if trees are allowed to be over-cropped one season they seldom produce a crop the next, as they are so exhausted as not to be able to make fruit buds, and if formed they do not become thoroughly developed, so that it is impossible for the flowers to produce any fruit. It may seem out of place to write about thinning fruit just now, but my object in doing so is to draw a comparison between the price obtained for good samples and those of inferior quality. We cannot expect, neither is it advisable, to have extra large fruit for general use, but an even average specimen is of far more value than a lot of small ones, unless it be for making cider. If we look over the dishes at shops, it is astonishing how few varieties are popular, and many of these are only grown for show, and by thinning the fruit, together with feeding, these are made to grow to an enormous size. Such fruit is not economical, as it will not keep for any length of time; therefore the practice of over-thinning and undue feeding is not to be recommended. What is required for general use are even, fair-sized samples, and such crops as do not weaken the trees. Most of my neighbours in this district are complaining of a scarcity of fruit; in fact, some of them

have quite a failure and are astonished to find that I have so much, but the explanation is not difficult, as my trees have been duly thinned of their crop each season, so that they are healthy and vigorous, having the flower-buds well developed, and at the time of flowering they are able to withstand the extra strain put upon them. We are apt to forget that at this period there are many things to contend with. If the weather be too wet the pollen seldom dries, while if dry and the flowers are deformed, the petals drop off before fertilisation has taken place, and when this is so the fruit never swells. Badly developed flowers, too, will not withstand the frost so well as those that are well formed; therefore, if there are only a few flowers, and these of the finest quality, there is far more prospect of having good fruit than when the trees are over-laden. Thinning, too, is seldom done early enough, as many are afraid to remove a portion of the crop, thinking that if more were to drop off it would be a short one, forgetting that though the number was less the bulk would be quite as great. I am no advocate of growing simply for exhibition, as such fruit is of but little value for any other purpose; but if trees are healthy and the crop evenly distributed over them far finer results would be obtained. Pears and Peaches on walls are usually thinned to advantage, then why not Apples and Plums? If this were more generally adopted I doubt if there would be a glut of fruit one season, and little or none the next, as the trees would be in a better condition to resist the inclement weather experienced in spring at the time they are in bloom. Fruit growing, if for profit, should be thoroughly understood before attempted, and the same applies when grown for private consumption, otherwise failures are sure to follow. Many gardeners not only fail to thin sufficiently, but neglect to do it in time, hence the reason the fruit is so small. Some varieties we know are more productive than others, and for this reason require to be attended to before the fruit has grown very large, otherwise much mischief will be done to the trees. H. C. P.

**Apple Ribston Pippin.**—In a season when good dessert Apples are none too plentiful, it is a welcome surprise to many to have a good lot of the old but valued Ribston Pippin. Some very fine fruit was staged at the recent Crystal Palace fruit show; indeed, in a few cases the fruit was equal in size to ordinary cooking Apples. With a revived interest in fruit culture the Ribston has had a full share of attention, and though formerly many only grew this variety in standard form, now by having it as a bush on the Paradise stock there is less canker, which ruined so many fine trees, and I notice the trees grown thus rarely fail to crop. This variety delights in a warm summer, and in good soils finishes a grand crop. My fruit from cordons near the soil this year is very fine, but it lacks the quality of that grown on bush trees.—G. W.

— In this season of scarcity of good Apples it is pleasant to find a really fine lot of such a good dessert kind as this, and this I did at Eekworth recently. Not only was there a heavy crop of fruit, but it was large and of excellent quality. The trees, too, on examination proved to be full of likely-looking fruit spurs, and therefore the promise for next season is good. Mr. Coster says that these trees were rather severely root-pruned some few years since, and doubtless this has something to do with their great fertility.—R.

**Strawberry Scarlet Queen.**—In the numerous answers of your correspondents I have only noticed one who mentions Scarlet Queen. It ripens after Royal Sovereign, and if I were limited to two va-

rieties, these two would be my selection. Scarlet Queen is of a good colour, fair size, very fruitful, sweet, and much superior to Royal Sovereign. My three-year-old plants carried heavy crops this year. The other varieties that have done well here are President and Marshal McMahon. Latest of All is delicious, but I get very few fruits from it. With the varieties named, grown in different aspects, I had a good supply of fruit for eight weeks this year and seven weeks last year. The soil is sandy, but good loam and rich manurial dressings, hot-bed and artificial, the latter applied in spring, have been added. The plants are watered, and about 2 feet below the surface what is called here "ream-water" is always found, so they do not dry up in summer. The runners are rooted in pots and planted out as early as possible.—B. ADY, Birkdale, Southport.

NOTES ON STRAWBERRIES.

We have to thank our readers all over the country for so kindly replying to the following questions, and we hope that the notes will prove valuable:—

*Will you kindly aid us in throwing some light on Strawberries of best quality for the use of private growers, as market growers have a different standard from that which applies to the private gardener, and favour those kinds that bear carriage, rather than those that are remarkable for flavour and quality? For those who use their own fruit we think that a different standard should be in use.*

1. *What kinds do you consider the best for flavour in your district, i.e., as grown in gardens, not taking into account those grown in the open field for market?*

2. *The best early and late kinds for the open air in your district?*

3. *Which of the newer sorts do you find most worthy of cultivation from a garden point of view?*

4. *The best time to plant so as to secure the best and most regular crops?*

— I grow on a south border for earliest sorts Black Prince and Laxton's Noble. The former is the better flavoured, but Noble is early and handsome, although soft for packing. It will be supplanted here by Royal Sovereign, which is almost or quite as early, and very fine, also better flavoured and firmer for packing. Black Prince is an enormous bearer but small. Sir Joseph Paxton is my best all-round Strawberry. I grow it in the open quarters for general crop and under a north wall for late supply; the fruit is large and handsome, firm, and well flavoured. Newton's Seedling is a fine cropper and fairly late, and good for preserving. I also grow a local sort—Colleton Pine—which is a strong grower, good cropper, fruit well flavoured, and firm. Sir Charles Napier with me is a great cropper, but acid. I have lately tried John Ruskin, Sensation, and La France, but they have not given me satisfaction when compared with other sorts. I plant out in July the plants that have been forced, into a piece of well-prepared ground, which ensures a good crop the following year. Other sorts for new beds which I do not force I layer into pots the same as those for forcing, and plant out in August.—JOHN GARLAND, Killerton, Exeter.

— Regarding flavour in Strawberries, I find that soil, situation, and seasons have a wonderful influence on varieties. One variety I grow, Marshal McMahon, which has usually been fairly sweet with me, has had a strong metallic flavour this year, so much so that it was quite unfit for dessert. For flavour, I consider Sir Harry, British Queen, President, and Royal Sovereign best, and Vicomtesse Héricart de Thury fairly good. Noble is the earliest variety, earlier than Royal Sove-

reign, and Latest of All and Jubilee the latest sorts. Jubilee, however, although a firm Strawberry, is of rather inferior flavour, except in sunny summers. To secure the best and most regular crops, I like to plant at the end of July, putting three in a clump, 3 inches apart, and 2 feet from centre of clump to centre of clump, with a space of 2½ feet between the rows. Under favourable conditions, such plants will yield a good crop the four following years, at the end of which time they may be destroyed.—J. RIDDELL, *Castle Howard*.

Referring to Strawberries, they were about our best crop this year, and had some of the early flowers not been injured by the frost, we should have had a fine crop. From the results of the last few seasons, I do not think it wise to grow very early Strawberries, as there is such great risk of the early flowers being spoilt by frost; better a little later, and safe. The best flowers of Royal Sovereign, Scarlet Queen, and Noble were spoilt, as they were advanced enough to get a touch of frost. In reference to late kinds, the last I tried were Latest of All and Frogmore Late Pine, but they have not proved satisfactory with me. A neighbouring gardener grows very fine fruit of Latest of All, which shows that the adaptability of certain kinds to different places (soils) is very apparent. After trying a lot of kinds, I have not yet found a better one than President for its good qualities, that is, bearing good crops of fine fruit and of fair flavour. Royal Sovereign is certainly a good variety of recent introduction. John Ruskin, where it will grow well, should prove a very useful kind, but it will require to be well established in good strong plants, as it is not such a strong grower as many sorts. The best time to plant is, no doubt, as soon as young, strong plants can be obtained. I find they do very well after early Potatoes, as the ground is in good condition, requiring little preparation. After the ground has been pointed over I place some old Mushroom manure along where the plants are to be, and this, when planting is done, gets worked in round the roots, which helps them greatly to get strong before winter, and the almost certainty of a good crop of fruit the succeeding year if frost keeps off when in bloom. There is nothing like planting a young lot every year about the first week in August, then a corresponding old lot can be dug down every winter. My batch for this year comprised President, Royal Sovereign, Sir Harry, and John Ruskin, and they were planted on August 6.—R. MCKELLAR, *Abney Hall, Cheddle*.

I find the best results are obtained by making a fresh plantation each season, on well prepared ground, as early in August as possible. I prefer young plants in 3-inch pots, which can easily be obtained by taking the best runners and layering as early as possible in the season. I am this season giving Royal Sovereign more space, as it grows very vigorously with me. On the other hand, such sorts as Gunton Park and Latest of All may be planted considerably closer together. I also find that by putting out strong, well-rooted plants about the second or third week in August, they will, if well cared for, carry a splendid crop of fruit the next season; it must also be noted that these young plants ripen their fruits in advance of the older plants, which is of considerable importance, and from results obtained I feel convinced that the finest fruits are produced by these yearling plants. A full and heavy crop is generally obtained the second season, after which I find the plants begin to show signs of exhaustion and are better destroyed. If kept and fruited the third season, the fruit is considerably smaller, consequently not so profitable. After a trial of a number of varieties, those that find most favour here are Royal Sovereign, Gunton Park, Leader, Monarch, President, and Latest of All. The last I consider a very valuable addition to the late varieties, it crops well, and is of excellent flavour. I shall grow more of it in future. I gathered the first dish of Strawberries in the open on June 14 (being ten days later than last year), off Royal Sovereign; the last being gathered off

Latest of All July 24, and this in spite of the heat and drought. A constant supply was maintained for upwards of six weeks. Of the new varieties of Strawberries here, Laxton's Monarch and Leader have produced the best fruits, they are both fine mid-season varieties coming in after Royal Sovereign. Of the two, I should give the preference to Leader, the fruits are very large, the flavour also is very good. For flavour, colour, and size combined, the palm must certainly be awarded to Gunton Park. This is a great favourite here, and from young plants very fine fruits are obtained.—JAMES HAWKE, *Osterley Park Gardens, Isleworth*.

The Strawberry crop suffered from the May frost, which destroyed the early blooms, otherwise there was every prospect of a good full crop, and then towards the finishing of the crop the hot, dry weather prevented the proper maturity of the fruit, which was, on the whole, under the average. The varieties most favoured here are Royal Sovereign, Sir Joseph Paxton, Auguste Boisselot, Keens' Seedling, and Vicomtesse Héricart de Thury, the last for preserving, the fruit coming out whole after being cooked. For forcing I like Stevens' Wonder, which has done well with me, also Royal Sovereign, Keens' Seedling, and Noble. Keens' Seedling is much appreciated for its flavour, although of late years there has been the cry for large fruit, and for this reason Noble was, and is still, tolerated, although lacking in flavour and firmness. Vicomtesse H. de Thury by many is considered too small. I am a strong advocate for yearly planting, making a new plantation every autumn, layering into small pots, and planting on well-prepared ground as early as possible in August; by so doing a good crop of first-class fruit is obtained the following year. I have of necessity planted in September and the following spring, but have never obtained such good results from the practice, and as far as this neighbourhood goes, early planting is recommended. I am no advocate for retaining the plantations after the third year, when much better results can be obtained from younger plants.—J. LEE, *Gopsall Hall, Warwick*.

The best kinds for flavour in this district are Vicomtesse Héricart de Thury, La Grosse Sucrée, and British Queen. The best for early use are John Ruskin, Vicomtesse Héricart de Thury, Noble, and La Grosse Sucrée; for late use, Elton Pine and British Queen. Of the newer sorts, Royal Sovereign is the best. The best time to plant is about the last week in August.—W. CHESTER, *Chatsworth*.

For flavour I must give preference to Royal Sovereign, Latest of All, and British Queen. The two former are the best I have tried. I have had perfect fruits of Royal Sovereign over 2 ozs. each. Keens' Seedling, closely followed by Royal Sovereign, British Queen, and Latest of All, which carry us well on to the latter end of July, I consider the best for open air in this district. The newer kinds I find do best here are Royal Sovereign and Latest of All, and what I have seen and heard of Veitch's Perfection I think it will make a grand midseason variety. Strong runners layered early in July into 3-inch pots may be severed from the plant and placed on ashes, and given plenty of room between each plant so that they do not become drawn. In about two weeks they will be fit to plant out in ground that has been trenched and liberally manured, taking care to well firm the soil round the plants. I have three large plantations, and do away with one each year and plant one; by so doing the plants are young and healthy.—H. W. BLAKE, *Clendon Park, Guildford*.

Noble is a wonderful cropper and as early as any here. In hot seasons it is acceptable for dessert, but in wet seasons it is only fit for jam. Royal Sovereign is only four or five days later; I have grown it two seasons, but the crops so far have not been heavy, hardly an average crop, and flavour not first-rate. Monarch, about a week later, is a very fine fruit, rather shy bearer so far, flavour fairly good. Leader is very large, of good flavour, but I will try it again before recommend-

ing it. President is by far the best Strawberry here, a good heavy cropper, of the finest flavour any season, and keeps a long while before decaying. Auguste Nicaise is a heavy cropper, and a fine flavour, but wants gathering the same as it ripens or it goes dead, and it does not stand hot, dry weather. It forces well as a second early. Sir Joseph Paxton is not a good cropper here, the soil perhaps is too rich, as it runs very much to leaf; flavour good, but the fruit is hard and not so nice as that of President. Latest of All I have only grown this year, but I think will be the best late, fruit large, of good flavour but rather woolly and hollow in centre. Grosse Sucrée should have been placed before President in the order of ripening. It is of very fine flavour, nearly equal to President, but is not a very heavy cropper. I always get the runners as early as possible, so as to plant by the week in July on land that was trenched the previous winter and cropped with early Peas. I do two years, then destroy the plants.—J. LANSDOWN, *Barkby Hall, Leicester*.

The best for flavour are Vicomtesse Héricart de Thury, President, Lord Suffield, Gunton Park and British Queen. The best early and those mentioned, with the addition of Royal Sovereign. The best new variety is undoubtedly Royal Sovereign. Monarch and Leader produce well, but it is yet too early to give a definite opinion. The best time to plant, I find, is early in August, on deeply cultivated ground, with runners taken from young plants layered into pots.—J. BLACKBURN, *Elmstead Grange, Chislehurst*.

Strawberries on the whole have yielded abundantly. Both early and mid-season varieties were good, but owing to the hot, dry weather later varieties were prevented from maturing their fruits. While dealing with Strawberries, there are several varieties which I would point out as being most suitable for private use only, and in this flavour is the first consideration; secondly, the prolongation of the season's fruiting. Both here and the surrounding district, Royal Sovereign can be equalled by any other variety of its season either when forced or grown in the open border. Vicomtesse H. de Thury and Scarlet Queen two excellent varieties, and either may be planted to come in quick succession to Royal Sovereign followed by a selection of very choice mid-season kinds, namely: Sir Charles Napier, Sir Joseph Paxton, President, Dr. Hogg, Gunton Park and British Queen, the richest-flavoured Strawberry yet introduced. It must have high culture, otherwise the results will prove most satisfactory. Waterloo, a very distinct, dark coloured variety is, I may say, one of the best most sought for late kinds. Laxton's Latest of All is a grand Strawberry, and no collection complete without it. This season I have tried several varieties of recent introduction, but from my knowledge of their quality so far, I fear they will not be appreciated by the private grower.—A. METCALFE, *The Gardens, Burghley House, Stamford*.

Of Strawberries I only grow seven varieties—Royal Sovereign, Vicomtesse Héricart de Thury, Sir Charles Napier, Sir Joseph Paxton, President, Waterloo, and Aromatic. I find the above varieties of fairly good flavour in an ordinary season. President is a favourite here and is the best of the lot for flavour. If planted too close the fruit is rather inclined to be of a light colour. Royal Sovereign is the best early, Noble, John Ruskin, and La Grosse Sucrée have been discarded. Waterloo on a north border is the latest, and very much esteemed here for dessert. Royal Sovereign is the only new variety that I have tried. I must say it is a capital cropper, carrying heavy crops of fine fruit. It does well outside. I always layer runners as early as possible, and plant out of pots when well rooted as soon after July 20 as possible, and usually a nice crop the first year. Vicomtesse H. de Thury is grown chiefly for jam, but when not allowed to stand over three years on the same ground it crops of a good size and a nice flavour.—F. W. BEEVEY, *The Gardens, Stoke Court, Slough*.

STOVE AND GREENHOUSE.

HELICONIAS.

OME of the Heliconias are very ornamental plants for the stove by reason of their lustrous foliage. They are nearly allied to the Ananas, and some of them bear a general resemblance to the dwarf-growing members of that genus. They are not much known, and are but rarely met with in gardens, by far the

and the entire plant is altogether more graceful than *H. aureo-striata*. *H. illustris* is in the way of *H. aureo-striata*, but the colouring is altogether different. In this the ground colour of the leaf is green, with the prominent mid-rib of a beautiful shade of deep pink, while the veins are also marked in a similar manner. The leaf-stalks, too, are bright pink. In the variety *H. illustris rubricaulis* (here illustrated) the leaf-stalks are of a bright vermilion-red, the leaf-blades rosy red, the venation being a combina-

tion of stagnant moisture, yet need plenty of water during the growing season. In the winter the soil should be kept moderately moist, but nothing more. They must be shaded from bright sunshine throughout the summer months, otherwise the leaves lose a good deal of their bright colouring. These plants are readily increased by division, and when it is intended to propagate them in this way, the early spring is a very suitable time for the purpose. In carrying this out, as much of the soil should be shaken off as is necessary for tracing the course of the suckers, which must be separated with a sharp knife, with as many roots as possible attached to each. They must then be potted into suitable sized pots, and if plunged into gentle bottom-heat in a close case till root action recommences, so much the better. Instead of shaking off the soil, there is less liability to injure the roots if it is removed by holding the ball of earth underneath a tap, provided the water is warm.

Mr. T. Ryan, Castlewellan Gardens, sends us the following note:—

The plant grows rapidly in a moist stove temperature, doing well in rich loamy soil. When growing freely plenty of water should be given. It requires to be shaded from bright sunshine and is propagated freely by division of the root-stalk. The illustration represents a specimen growing in a pot 12 inches in diameter in the Water Lily house in the Earl of Annesley's garden at Castlewellan. The plant is 5 feet in height and has over twenty leaves, each leaf being 9 inches across.

**Fuchsia triphylla.**—This is valuable for its distinct colour, and would doubtless, in the hands of a careful hybridiser, be turned to good account. But while possessing a very distinct and beautiful colour, a shade by no means common, the species is not usually seen in good condition in gardens. This may in some degree be due to the fact that in a wild state the plant is found in much warmer regions than most species, and for this reason is not likely to submit to the same treatment as the hardier species or their varieties. *F. triphylla* is found in the West Indies, and requires a warm greenhouse to grow it well. The flowers are glowing cinnabar red, and as grown by Mr. Latham, in the Birmingham Botanic Gardens, it constitutes a most showy and attractive plant.

**Carnation Winter Cheer.**—This old kind is still useful, and, where the old plants have been taken care of, will produce good blooms for some time to come. Possessing less of the tree character than most perpetual flowering Carnations this does not run away to growth as do many kinds, and thus even two-year-old plants are under 2 feet high when grown in pots the whole time. As a scarlet it is a more desirable plant than the old *A. Alegatiere*, which appears to have lost much of its early vigour as also its fine colour. This is so in certain districts near London, and, as a result, the larger growers are discarding it wholesale. During the past two years many flowers have become streaked with white, and, while receiving the same culture as formerly, diminished in size also. The variety seems to be nearly worn out.—J.

**Pelargonium Duke of Fife.**—This Pelargonium (which, by the way, is not the only variety bearing the above name), belongs to the semi-double zonal section, a class which, for cutting at least, is very popular, owing to the fact that the petals do not drop so readily as those of the single kinds. It has been grown for some time by Messrs. Hawkins and Bennett of Twickenham, so well known in connection with market Pelargoniums, but as cut blooms only were disposed of it was not cultivated elsewhere. It is, however, now to be sent out, and in order to show its freedom of flowering and the fine, bold trusses of blossoms borne on long, stout stems, numerous examples in bloom were shown both at



*Heliconia illustris rubricaulis* in the Water Lily house at Castlewellan. From a photograph by Lord Annesley.

most commonly cultivated being *Heliconia aureo-striata*, which was introduced about a dozen years ago. In this the leaves are of a deep green, the veins running from the mid-rib to the margin, marked out by yellow lines, thus forming when in good condition a really striking plant. A species, very distinct from the preceding, is *H. metallica*, which suggests a fine, bold, yet somewhat dwarf-growing form of *Can.* The leaves are of a bronzy-green tint edged with red. They are slightly drooping,

and the entire plant is altogether more graceful than *H. aureo-striata*. *H. illustris* is in the way of *H. aureo-striata*, but the colouring is altogether different. In this the ground colour of the leaf is green, with the prominent mid-rib of a beautiful shade of deep pink, while the veins are also marked in a similar manner. The leaf-stalks, too, are bright pink. In the variety *H. illustris rubricaulis* (here illustrated) the leaf-stalks are of a bright vermilion-red, the leaf-blades rosy red, the venation being a combina-

tion of crimson-lake, vermilion, rose and yellow evenly distributed. These Heliconias are by no means difficult to cultivate, succeeding best in a mixture of loam and well-decayed leaf-mould, with a liberal dash of sand. They dislike soil of too heavy a nature, and though the quality of loam varies a good deal, yet, generally speaking, equal parts of loam and leaf-mould will form a suitable compost. The pots should be well drained, for the plants, while

the Royal Horticultural Society's meeting and at the Aquarium on October 12. As a winter-flowering variety for providing cut blooms in quantity it promises to take high rank.—H. P.

**Nertera depressa.**—This is met with much less frequently than it was a few years since, but it is such a charming little plant that it is matter for surprise that it does not increase in popularity. It is of a dense cushion-like growth, and is fresh and cheerful at all seasons. Its beauty is considerably enhanced by its brightly-coloured little berries, which, nesting as they do on the green Moss-like cushion, have a wonderfully pretty effect. This *Nertera* is a very shallow-rooting subject, and may, therefore, be grown in pans if required, while for carpeting the surface of an indoor fernery it is extremely useful. Where needed for edging groups or for similar purposes, it may be grown in pots 4 inches or 5 inches in diameter, in which case it should be borne in mind that no great depth of soil is required; hence the pots should be given ample drainage. This *Nertera* is readily increased by division, which should, however, be carried out quite early in the spring, as there is then ample time for the plants to become established before the flowering season. The blossoms are greenish, and play no part in the embellishment of the plant. It succeeds well in loam and leaf-mould, with a fair sprinkling of sand and broken brick rubble. Do not pot too deeply. Ample overhead watering is very essential during the growing season. This *Nertera*, which is nearly hardy in this country, is a native of the southern part of South America, and it also occurs in New Zealand.—H. P.

#### CANNAS IN FLOWER.

APART from *Chrysanthemums*, one of the most attractive exhibits at the Aquarium on October 12 was a fine group of *Cannas* in flower sent by Mr. Cannell from Swanley. Such a collection well illustrated the great strides that have been made in this now popular class of plants within the last few years, and it also showed the diverse forms that are to be found amongst them. Particularly noticeable in the group were *Aurore*, salmon-red; *Aurea*, bright clear yellow; *Incendie*, orange-red, edged gold; *Progrès*, bright scarlet; *Doyen J. Liaband*, light yellow, with large red spots; *Paul Lorenz*, rich crimson flowers, dark foliage, one of the very best; *Duchess of York*, yellow, thickly spotted red, unsurpassed in its class; *Antoine Crozy*, rich crimson; *Alphonse Bouvier*, deep purplish crimson; *Martin Cabuzac*, vermilion; *Queen Charlotte*, bright red, with a broad margin of gold; *Italia*, scarlet and yellow; and a very beautiful variety bearing the inordinately long name of *Reichskanzler Fürst Hohenlohe*. The flower of this is large and well shaped, the colour uniform bright yellow, except the small segments in the centre, which are slightly marked red. This class of *Cannas* is valuable for so many purposes, and is now so generally grown that one scarcely regards them as of such recent introduction, for it was only in 1888 that the earliest forms received certificates from the Royal Horticultural Society. Since that time immense numbers have been propagated in this country, still larger quantities sent here from some of the continental nurserymen—notably from M. Crozy, with whom this section originated; while at least one dealer in Algiers disposes of large quantities, apparently grown in the open ground. Bermuda, too, has taken the variety *Mme. Crozy* in hand. Last spring several boxes of this *Canna* were sold in the London auction rooms, but they were cheaply disposed of. The raising of new varieties still continues, though not much carried out in this country. M. Crozy himself generally issues a few novelties each year, while the two large-growing forms (*Austria* and *Italia*), which have attracted so much attention within the last year or two, are of Italian origin. These two are, however, for general purposes scarcely so useful as the dwarfier forms known as *Crozy*

*Cannas*. All these are of very easy culture, and many of them will continue to flower for a long time. A proof of their varied season of blooming is shown in the fact that *Cannas* of this section always form a particularly bright feature at the Temple show in May, and now the same may be said of them at the Aquarium in October. Planted out in the summer, too, they are very beautiful, but there is one disadvantage in treating them in this way, for at the commencement of autumn they push up far more flower-spikes than at any other season, and the cold nights prevent the blooms from opening properly. When grown in pots a little heat can be given them during this trying period, and the results then are highly satisfactory. These *Cannas* are all liberal feeders, and should be potted in a compost consisting principally of good loam and well-decayed manure with a dash of sand. If they are obtained during the winter in the shape of dormant rhizomes they should be potted as soon as possible and placed in a greenhouse temperature, the soil being kept slightly moist. Just about the time that the young leaves are pushed up the roots are very active, when if required they may be put into larger pots, using the same compost as before. If the rhizomes are of sufficient vigour, many of the plants will soon flower, after which secondary shoots are pushed up, which in their turn produce spikes of blossoms. These *Gladiolus*-flowered *Cannas*, as they are sometimes called, are of little use for cutting, otherwise they would be more grown than they are now. There is a great deal of difference in the hardiness and vigour of the several varieties, and in a general way it will be found that those with yellow blossoms, dotted more or less with red, require more care than the scarlet or crimson-coloured varieties. During the winter the soil should be kept slightly moist, as if too dry the rhizomes, especially of the more delicate kinds, will suffer. H. P.

**Rust on Malmaison Carnations.**—Every late autumn I am much perplexed at the appearance of rust on my Malmaison Carnations. I have tried all ways and means to prevent its appearance and subsequent spreading, but all to no purpose. Uriah Pike and Miss Jolliffe grown side by side never take it. What seems the most singular thing is that it entirely disappears in early spring, and the plants get quite vigorous and healthy, though of course with loss of lower leaves. When layers were potted up in August scarcely a trace was visible. Now it spreads very rapidly, the layers being much worse than two-year-old plants. I notice a long spell of damp, sunless weather favours the rapid spread of the disease. The roots of all are in excellent condition. The plants are potted in the best yellow fibrous loam, grit, and half-inch bones. They were taken from the frames early in September to a dry, airy house with a minimum temperature of 50°, and have had nothing but clear water with the exception of weak soot water a few times. They have only been watered when quite dry. Any enlightenment as to the cause and prevention would, I am sure, be read with interest by many of the readers of THE GARDEN.—I. R.

**Zonal Pelargonium Adolphe Brisson.**—This *Pelargonium*, which received the award of three crosses at a meeting of the floral committee of the Royal Horticultural Society, held at Chiswick on October 4, is one of M. Lemoine's seedlings, and is a very distinct and beautiful variety. It shows traces of *Souvenir de Mirande*, which when first sent out attracted a good deal of attention owing to its distinct character. This proved to be the commencement of quite a new race of zonal *Pelargoniums*, and several varieties were in turn put into commerce by different nurserymen. One of the most richly coloured was *Mme. Jules Chrétien*, which soon became and is still popular, but the above-named variety, *Adolphe Brisson*, greatly surpasses it in this respect. It is of medium vigour and good habit, while it flowers profusely. The colour is extremely difficult to describe, but it is a kind of earmine-

scarlet, lit up with violet towards the centre while it has a light coloured eye. This variety was put into commerce by M. Lemoine in 1878. A second variety from the same raiser also received an equal award—viz., *Jules Lemaître*, which is very large, well-formed, crimson-scarlet flower. This was sent out a year before the preceding. There are certainly many very distinct zonal *Pelargoniums*, especially from the Continent, as there are double forms of this *Mme. Jules Chrétien* section as well as single, white spot flowers, perhaps more of a curiosity than anything else, but decidedly distinct, are among the latest novelties.—H. P.

#### CRINUM MOOREI.

ALTHOUGH such a handsome plant and so useful for conservatory decoration or cutting, this *Crinum* is not often seen in good condition. In nine cases out of ten where this is grown the plants have taken their own way, and are left lying about some odd corner while they should be making their growth. It is one of the very easiest plants to grow, and possibly this is why it is so often ill-treated. The bulbs are quite safe in any lished during the winter if house room cannot be spared for them, provided only frost is excluded. They may be kept quite dry until February or March, when they may be taken to a vinery or Peach house just starting. Thoroughly soak the soil once, then let it get fairly on the side again before watering. After this increase the supply as the leaves form; growth will be very rapid and the spikes appear the sides of the bulbs. Large old plants I have been in flower since June, and there are several flowers to open. If the plants are in least pot-bound, some artificial manure should be used as a top-dressing, as it is important, if proper habit of the plants is to show, that they not checked in any way. *C. Moorei* is a very strong-rooting plant, and the roots, if confined soon burst the strongest-made pots. For reason they should be repotted when they are well-filled their pots with roots, and when they get above a manageable size split them up and repot into smaller pots. The best time to do this is in spring, and the most suitable compost, rough, open one consisting of sandy loam, 1 part mould and manure. The foliage has a neat appearance when well grown. The leaves are not easily injured by sunlight, still, it is safer not to expose them to the full sun in summer. The plants are sometimes grown in a vinery until the flower-spikes are nearly fully grown, and then taken to the conservatory, where they miss the shade of the vines and become spotted. If they been grown in the full light right through no harm would have been done, as the leaves would have become firmer and harder in texture. They may remain in the conservatory as long as they are ornamental, but in most cases have come out to make room for *Chrysanthemum*. The lightest and sunniest position available should then be allowed until the leaves fall, when they may go again into their winter quarters. B.

**Celsia cretica.**—This plant is very pretty just now, the spikes of yellow blossoms making a capital subject for grouping in the greenhouse conservatory. It is best grown as a biennial, sowing the seed in a cool house or frame about midsummer and keeping the seedlings general on the move through the autumn. During the winter they may be kept just secure from frost in small pots, allowing them the lightest position available. Place them in their flowering pots in spring—early or late as they are required to bloom—and keep them growing freely in a cold frame until the flower-spikes show, when they may be taken to the conservatory.

**Christmas Roses in pots.**—It is now high time, if not already done, that these should be moved under glass, as growth having some time practically ceased harm will occur if they become repeatedly saturated by cold rains.

fectly cool house and a light position suit best. In such the useful white blooms will usually be ready for cutting in January. I have several times moved a few plants into a gentle pit, say 60°, in order to secure earlier flowers, and they force fairly well, but the plants do not do for the ordeal, those forced being considerably weaker in growth at the end of the following summer. Since the cultivation of Christmas trees in pots has become better understood many blooms are produced, equal both in size and value to wreath-making to the Eucharis, the plants being grown without one half the trouble. The large white Bath variety is still the best as regards size and whiteness.—J. CRAWFORD.

**American Carnations.**—On page 320 Mr. Vaguelin informs your readers that the American varieties of Carnations have saw-edged petals, which are papery and thin and have no substance. I quite agree with the remark in respect to the serrated edges, but the Americans prefer the serrated edges to be regular. I am afraid in water-blooming Carnations it is difficult to find, even among the English productions, any other than rough-edged blooms. I do not assert that there are none, but the majority have rough edges to the petals. I know of no American variety which has such fringed edges as Mrs. Gardner Muir, certificated by the Royal Horticultural Society some two years ago, thereby proving that the saw-edged petal is not fatal to its consideration. I must take exception to Mr. Vaguelin's assertion that the American Carnations lack substance. It is a strong point in their favour when properly grown, this and a long, strong stem being essential with the judges in that country. When we consider the great distance that many of the American-grown flowers travel, it will be conceded that substance is a matter that should not be overlooked.—W. J. GODFREY.

**NERINE FOTHERGILLI.**

These plants are more showy or beautiful than this year, the strong spikes, each with an umbel of brilliant scarlet flowers, being very freely produced when the plants are properly grown. Not the least of the merits of this fine species is its extreme hardiness, for specimens in flower will stand in draughty passages or conservatories without taking any harm. The culture of this Nerine is not difficult, yet in many places where it is attempted the plants are not satisfactory. It is important that the plants make a good growth after the flowers are past, a good position for them being a light sunny greenhouse or slightly heated frame. If old pot-bound specimens they should be assisted by a little manure water, this being materially to swell up the bulbs, thus causing the production of finer spikes of bloom. Newly-potted plants should not be too highly watered, for it is not a gross feeding plant by any means. The growths fully made up, the plants should be taken to a cool and rather dry house, placing them on a shelf not far from the roof lights. The foliage having fallen no water should be given, but the plants be kept quite cool and dry until the flower spikes appear when they may again be watered. It is too often the custom to stand the plants about under greenhouse stages after the flowers are past, the result of this treatment being weak, badly-ripened growths that never bloom properly because they never rest. Drip from the other plants upon the steps gets into the centre of the growths and rots them. They would be far better outside during the summer than in such positions, but the best of all places is a dry, light house or frame. The plants do not often require repotting unless it is for the sake of propagation. In this case they may be divided frequently and kept in the same pot for a couple of seasons only. But for producing a quantity of flower old pot-bound plants are best. The best compost for them is a rather light loam, if this can be procured, or, if not, the ordinary loam mixed with leaf mould, a little peat, and crushed charcoal. Good drainage is absolutely essential, and this should be kept in good

order by using a little rough peat or similar material before putting in the soil. Pot very firmly, and use pots of medium size, so that the roots soon get a good hold. They always seem more free flowering when the bulbs are crowding each other and growing out over the sides of the pots. Insects seldom trouble them if kept cool and with a good circulation of air all the year round. H. R.

**Gardenias.**—At page 267 "H. P." gives some most useful hints on the cultivation of Gardenias. He, however, deals with pot culture only, which, of course, in many gardens is the only method that can be followed. The best results that have come under my notice have been achieved under the planting-out system, heated pits being even better than small ordinary span-roofed or lean-to houses. In the former a uniform temperature can be maintained and a moist atmosphere, which Gardenias delight in when making new growth. Some time ago I saw a grand batch of plants at Ossington Hall, near Newark, these having been planted out in a bed of loam, peat, leaf-mould and sand when they had well filled a 4½-inch pot with roots. They made wonderful progress,



*Galanthus Icaria at Gravetye Manor. From an original drawing by H. G. Moon.*

growing into really dense bushes in one season, the foliage being of a dark green hue, and the flowers and buds when I saw them in October numerous. A little clarified soot water and weak liquid manure were given occasionally, and when making their growth the foliage was sometimes syringed, when the pit was closed, with water, into which a little of the latter had been poured, this aiding to keep insects off. In summer the heat was maintained by closing early and airing judiciously, the temperature during winter by fire-heat being kept as near 60° as possible.—J. C.

**SHORT NOTES.—STOVE & GREENHOUSE.**

**Salvia Bethelli** is a very pleasing and useful greenhouse plant, now well suited for effective groupings, where this is extensively adopted, by reason of the bushy character of the plants and their freedom of blooming.

**Zonal Pelargonium Hermione.**—This semi-double variety is a great advance both for summer and winter flowering. The blooms open well and are pure in colour. It is very free-flowering, whilst the habit is unusually dwarf.—H. S.

**FLOWER GARDEN.**

**SNOWDROPS IN SCOTLAND.**

The Snowdrop appeals to all. It brings with it the promise of spring, and on its appearance the flower lover rejoices. The Snowdrop is never more beautiful than when seen in snowy sheets in the meadows or woodland glades or scattered by the streamlet, but even in the more limited garden quarters it finds a welcome place. There, indeed, should be grown the choicer and rarer species and varieties which are as yet not plentiful enough to naturalise. Galanthus Elwesi is now cheap enough to plant in quantity, and is strikingly effective in great masses, but it is to *G. nivalis*, our common Snowdrop, that we have principally to look for giving these sheets of snow we delight to see in the park and woodland. The lover of the Snowdrop is not, however, content to limit himself to these well-known species. He seeks variety in form and in marking, and, besides, desires to prolong his season of pleasure by growing Snowdrops which come early into flower or bloom long after the others have lost their attractions. A good collection gives much to interest, and in a flowerless time helps to make the garden what it ought to be—a place into which one may go in any day of the year with the certainty of finding some gem to admire. In my garden these rarer species and many of Mr. Allen's choice seedlings are well represented, and a few notes of personal experience, supplemented by that of others, in the south-west of Scotland may appropriately accompany the engraving of one of the finest and most distinct of our newer Snowdrops.

The mild and moist climate of these almost sea-girt counties is not the most favourable for the welfare of the Galanthus. Moisture it does not object to, but when accompanied by a mild atmosphere, the dreaded Snowdrop fungus, once it gets a hold in the garden, spreads with great rapidity. To this pest I have to attribute the loss of a number of Snowdrops during the two last winters, which were both exceedingly mild. It has not as yet attacked the so-called autumn-flowering Snowdrops, but *G. Icaria*, a good sturdy grower in most places, has not been exempt, though some distance from parts of the garden where the fungus had previously made its appearance. One finds that the more elevated and airy the position, the less liable are the Snowdrops to the attacks of this disease, and that if it finds its way into a clump it is better to lift the affected roots and burn them with a little of the soil, well dusting the earth round about with sulphur.

**VARIETIES.**

There are too many Snowdrop names, and for practical garden purposes the autumn-flowering forms of *G. nivalis* may be said not to be recognisable under their names of coreyrensis, octobrensis, Regine Olga, &c. Collected roots of any of these do not flower together, and plants received as *G. coreyrensis* cannot be distinguished from those obtained as *G. octobrensis*. These varieties are mostly weak

growers, the best being *G. Elsee* and some received by way of Holland under the name of "species, probably *octobrensis*." It may be said that they are in this district not true autumn bloomers, the earliest generally coming into bloom in November. This year the first to appear above the soil is *G. Elsee*, which to-day (October 27) is only peeping through. This species—or rather variety—is a good doer here, and in this respect is a marked contrast to *G. Rachelæ*, a sister plant, which is a weak grower.

With the first days of the year we have a large number of Snowdrops either in flower or on the way. For all of these deep planting seems beneficial so far as producing stronger growth and larger flowers. *Galanthus Elwesi* in its several forms is among the first to come into bloom after the new year begins, coming occasionally, indeed, before it is entered upon. It is very variable, as may be expected in a species so widely distributed, and there are some charming forms to be found among the varieties of this Snowdrop. There is also a great difference in the blooming time, some varieties being a month or more after others. These varieties and selections from them would take up too much space to detail at the present time, but unsurpassed are *G. E. ochroscipilus* and *G. E. Cassaba*, although these vary much in themselves, the best being exceedingly fine. *G. E. unguiculatus* is a distinct variety, better in some seasons than in others, but valuable in most years by reason of its brave and sturdy-looking habit. Among the plants of *G. Cassaba* there will be found some which greatly surpass in beauty the much-praised *G. E. robustus*, which beside these best forms looks lumpy and ungraceful.

The really fine *G. plicatus* is very unsatisfactory from its habit of dying off without apparent cause and without showing any trace of the fungus. I have several hybrids here which are much more robust and have much finer flowers than the ordinary *plicatus*. *G. Imperati* from imported Italian bulbs appears difficult to establish, and no flowers I have yet had have nearly equalled those of its variety *Atkinsi*, a capital Snowdrop from every point of view, as is *G. Melvillei*. *G. latifolius* is not a satisfactory plant here. Frost injures its foliage, and it never recovers from the damage due to this, and eventually dwindles away. *G. Ikarie*, the subject of the woodcut, is much hardier, and from its superior flowers is more worthy of being grown, possessing, as it does, even more distinct leaves than those of *latifolius*. These long, bright, yet deep green arching leaves are very beautiful, and when grown in fairly good soil the flowers are also large and beautifully pure in colour. For most of the bulbs of this Snowdrop in my garden I was indebted to Mr. Edward Whittall, whose kindness has also given me an opportunity of growing several of the forms of *G. Elwesi*. The fungus, as already mentioned, has made me lose some of the Icarian Snowdrops. *G. caucasicus* does well in the rock garden here, but its principal merit is its broad, handsome leaves, the flowers being small in proportion. *G. Alleni* is a much finer plant in every way, but, like most of the strong-growing Snowdrops, it prefers a rather heavy soil. Among plants of *G. byzantinus*—a hybrid between *G. plicatus* and *G. Elwesi*—there is much variety, some being exceedingly poor, while a few are at least superior to *G. plicatus*. Garden hybrids of similar parentage are finer still, and a set of these gives many flowers of great beauty. From Mr. James Allen some of very superior excellence have come. On the light soil of my garden *G. Fosteri* thrives and in-

creases well. Our common Snowdrop has merits of its own which will make it hold its place in popular favour. Its many varieties are plants for the connoisseur, and not for the ordinary gardener. The so-called

#### YELLOW SNOWDROPS,

which have the markings and ovaries yellow instead of green, are really prettier than those who have not seen them would imagine. *G. lutescens*, which is the more delicate of the two known varieties, did very well for several years, but, to my disappointment, did not appear last season. The more robust *G. flavescens*, with brighter markings, is, however, in existence and receives many a look when in flower. *G. Sharlocki* is a peculiar little Snowdrop, whose long divided spathes and flowers, spotted with green outside, are always watched for on their appearing. It is a good grower, and superior in this respect to the delicately beautiful *G. poeciliformis*, whose inner segments are unmarked with the green streaks so familiar to those who examine the common Snowdrop. *G. virescens* does very well, and though dull-looking through the green which flushes its outer segments, grows strangely on one's liking. There are a good many of Mr. James Allen's seedlings here, and one might say much about these, as well as about selected plants from some wild Snowdrops, were it not that this note is already too long. I may be allowed, however, to remark that no attempt has been made to write of them from a botanist's, but from a gardener's point of view. To him—amateur or professional—the greater the interest taken in the "early herald of the infant year," the greater the pleasure he will derive from the study of its purity, its grace and its variety.

S. ARNOTT.

#### Carsethorn, by Dumfries, N.B.

**Fibrous-rooted Begonias.**—When looking at the splendid plants of *Begonia Gloire de Lorraine*, shown at the recent Drill Hall meeting by Mr. H. B. May, I could not help wishing that raisers and cross-breeders would endeavour to create just such a section for garden decoration. How beautiful were the heads of bloom, and how effective. For one bloom obtained from a big and very often an ungainly plant of the large-flowered tuberous section, now so much grown in the flower garden, these plants had twenty, though of course relatively small, but how much more pleasing. We have some charming things for summer work in the now varied *semperflorens* section of fibrous-rooted kinds, but the best of these are for decoration still far behind the beautiful heads of *Gloire de Lorraine*. The field thus opened for hybridisation should tempt experts to try and produce a new and, if possible, quite an effective strain for the flower garden. Certainly the large-flowered forms are already somewhat tiring their admirers.—A. D.

**Artistically-grown Carnations.**—In Mr. E. H. Woodall's note on "Border Carnations" (p. 258) allusion is made to the method of growing Carnations in such a manner that the plants may hang over a wall or bank and cover its surface with foliage and flower. The beauty of Carnations grown in such a way cannot be surpassed, and I can well imagine the appearance of the great breadths he refers to as growing in the stable-yard at Tarifa. I have often been delighted, when passing through some little Spanish town, at the sight of wrought-iron balconies of the quaint houses literally ablaze with Carnations, brilliant vermilion, bright rose, yellow, pink and white. Large plants are these, growing, for the most part, in deep boxes, from which the vigorous foliage threading the ironwork forms a mat of glaucous green, that spreads over a space of the balcony and droops below thickly starred with blossom. To the artistic eye the effect of these

freely-growing flower masses is charming, a possesses a grace of form that is lacking when plants are grown in flat beds.—S. W. F.

**Early planting of frame Violets.**—Mr. Crawford on page 280 draws attention to the necessity of planting Violets, in the frames a pits in which they are to flower through the winter, not later than the last week in September. All Violet growers should follow this wise advice for by so doing they will ensure their plants getting a good hold of the soil before the first frost, which checks root-action and entails putting on and closing of the lights. Some advocate delaying the planting till the middle or end of October, but even in the south-west such protraction is inadvisable, as a sharp frost at the end of October or beginning of November is not unheard-of occurrence in that most favoured region, while further north the likelihood of frost arriving before the plants are established is greater. I was looking lately at a 200-foot pit that was filled with well-grown Violet plants towards the end of September. The clumps were taken up well studded with buds, and, he rains falling immediately after their planting they were well settled into the soil and not flagged for an instant. By the commencement of October they were in bloom, and since the first of the month have produced about 1000 large bunches of fragrant blossoms.—S. W. F., Torquay.

**Herbaceous Lobelias.**—I am glad to find from his note (p. 299) that "R." finds these beautiful Lobelias hardy with him. Both the green-leaved variety, which, I believe, is the proper *cardinalis*, and those whose leaves hold more red in them and are smoother in texture, which belong to the *L. fulgens* strain, are hardy with me. Since their first planting in 1892 they have increased year by year, and although they have had not the slightest protection in the form of a mulch and are growing in damp ground close to water, have never suffered from the frost which in their low-lying situation has sent the mercury down to 11°. Three times the clumps have been divided during October, one occasion being in 1894, just prior to the prolonged frost of 1895, but not a plant succumbed. "A. D." on page 280 says that in cold or wet soils it is safer to lift the roots rather than let them remain *in situ* during the winter. It, of course, appears reasonable that the roots should winter more safely in a warm, dry soil than in a cold and damp one, but in practice I have found that just the opposite was the case. These Lobelias live through the winter after winter without a glance being bestowed upon them in this heavy loam; whereas, some years ago I was unable to keep them alive in light, dry soil and in a remarkably sheltered position, although I took every precaution to preserve them unharmed. The finest spikes are fully 4 feet in height, and lasting as they are through almost two months, a mass of these brilliant flowers is a most striking feature in the autumn garden.—S. W. F., Torquay.

**Winter treatment of Cannas.**—I have several dwarf Cannas in the garden in bloom. Should they be potted now, and can they be kept through the winter in a cool greenhouse? Any information as to their treatment will be acceptable.—E. O.

\*.\* The dwarf-flowering Cannas are less robust in constitution than the strong growing kinds, and in order to winter those successfully that are now in the open garden they should be taken up as soon as possible and potted at once, using for the purpose pots just large enough to get the roots into without injury. They may be wintered safely in a cool greenhouse, that is to say, a structure from which frost is excluded, but they should not be dried up by placing them too near the water pipes. The soil throughout the winter must be kept slightly moist, that is, just sufficient to prevent it becoming dust-dry, but nothing further. These dwarf Cannas would have been better if lifted and potted a week or two ago. Instead of using pots the roots may be safely stored during the winter in shallow

kes, a few holes being made in the bottom and a layer of broken crocks placed thereon for drainage. They must then be covered with soil exactly as in pots, and tho after treatment is just the same. The advantage of potting these Cannas instead of planting them in boxes is that in the spring they get into growth without any check, and when the danger from frost is over they can then be planted in the open garden; whereas if wintered in boxes they must be potted separately when growth recommences in the spring. As a partial offset, however, may be mentioned the fact that a number of roots in a box occupy less space during the winter than when they are all potted separately.—H. P.

ANDROSACE LANUGINOSA.

WHAT may be accomplished by doing things well is shown in THE GARDEN at page 257 by an illustration of the above plant. As a lover of alpine plants, the example appealed to me as quite unique in a British garden, and to my request for some further particulars concerning it, Mr. Milner has responded freely and fully. This lovely patch of one of the best alpine plants, it appears, is growing on a slightly elevated rockwork some 3 feet above the ground. The soil, which is about 2 feet deep, is made up of loam, leaf-mould, peat, yellow sand and half-inch limestone chippings freely mixed together. The aspect in which the plant is grown is full south. I have very carefully counted the trusses of bloom at the moment the picture was taken, and find at least 130. This was on the 29th of the present year. Writing on October 21st Mr. Milner kindly informs me the plant is "fairly well covered with its beautiful flowers now and began to flower in the end of May." Such information is of the greatest value. Too often the lovely species is seen with a dozen or so of flower-heads and a few extended and somewhat woody stems that do not bear evidence of much vigour. The unequalled success with this pretty species at Totley Hall is obviously due to the deep bed of prepared soil in which the plant is growing. This having ensued, the flowers come in profusion. But because an alpine is dwarf of stature or of low trailing habit or small proportions generally, the merest handful of soil is given at planting time; hence many of the most beautiful gems of the true alpine flora are but short-lived and poorly flowered in our gardens. The *Androsace* in question is by no means noteworthy as a great rooter or even so difficult to grow as some species; yet, with the illustration of its success at Totley Hall, none can gainsay the innumerable benefits that accrue from giving abundance of soil, and this of good quality, so that the roots may descend and find moisture in the heart of summer. In these deep-rooting mediums alpine plants never feel the heat and drought. At were a much larger number of choice alpine plants in a liberal depth of soil, we should see, as at Totley, lovely patches of colour, bearing a far greater profusion of blossoms than is frequently the case at present. E. J.

**Ornamental The Burn Pink.**—Referring to your note on above in your issue of 23rd ult. (p. 19), I beg to say, once for all, that the above name was never distributed as *Maggie Lawie* by the raiser or by any authorised person, and I am perfectly certain that it never was known by that name until after the raiser's death. If "*M.*" is a better authority on the subject than my gardener—a son of the raiser—let him give his name. At the same time I must say that *Duchess of Fife* is still more improper name for this variety, as it is raised about fifteen years before there existed a *Duchess of Fife* at all, and its advertisement as a new seedling under that name was very misleading. I therefore fully agree with "*M.*"'s protest.—CHAS. McINROY (Col.), *The Beech Edzell, N. B.*

**Tree Peonies.**—Among a number of Tree Peonies imported from Japan I flowered one

exactly like that depicted on the coloured plate in THE GARDEN October 23, and a charming variety it was, the contrast between the deep-coloured markings at the base of the petals and the rest of the flower being very pronounced. There was also from the same source a smaller flower of much the same colour, while the most admired of any was a huge semi-double bloom of an intense silvery whiteness, a variety which seems to crop up pretty frequently among these Japanese importations, for I seldom flower a few without one or more plants of this particular form making their appearance. A considerable number of Tree Peonies sent direct from Japan are to be met with during the winter months in the London auction rooms, and, as far as my experience of them extends, the selection of varieties is generally very good. It is only within the last few years that they have been sent in quantity. Previous to this I have seen them fetch comparatively high prices when sold by auction; thus I have a note of lots consisting of seven or eight plants realising as much as twenty-eight shillings in the early part of 1890. Now, however, they may at times be picked up much more cheaply. These Japanese Peonies are all grafted on to roots of the herbaceous section, which push up suckers continuously, so that constant attention is necessary, otherwise the graft will soon be completely choked. The thick, fleshy roots on which they are grafted no doubt enable them to withstand the journey better than they would on their own roots, which are less stout than the others. In potting or planting, however, especial care must be taken to prevent the scion being broken off, as the point of union is generally a weak spot.—H. P.

THE LEAF-BROWNING DISEASE.

In a previous article I directed the attention of the Horticultural Society of France to the leaf-browning disease and the parasite which is the real cause of it. I pointed out the *Pseudococcis Vitis* (Debray), one of the gelatinous or slimy fungi, as the source to which should be assigned those premature mortifications of leaf-tissues which were supposed to be the result of scorching from sunstroke, while the brown colour of these dead tissues, so disfiguring to ornamental plants, was actually produced by the ravages of the parasitic *Pseudococcis*. Since then I have made fresh observations, which appear to me to be sufficiently interesting to warrant my laying them before the society, and of which the particulars will be found in the following paragraphs:—

(1) **THE CURL, A DISEASE OF THE POTATO LEAF CONNECTED WITH THE LEAF-BROWNING DISEASE.**—In the course of my cultural experience I have discovered the explanation of an old disease of the Potato (the true cause of which was previously unknown) in the fact that it is the work of this same parasite. It may be remembered that I stated that some Potatoes which were more or less blackened by the *Pseudococcis* had produced in spring rather short shoots, the blackened and withered extremities of which contained plasmodia of this slimy fungus. I planted several of these tubers to see what they would come to. Five of them produced no stems, and I thought they had entirely decayed, but on taking them up, six weeks after they were planted, I found that the shoots, of which the ends only were dead, had produced some stolons on which small tubers were growing. Some Potatoes, however, with shoots attacked in the same manner, which had been kept in boxes had also produced some of these small tubers, but had no visible stolons. It is usual, I think, for all Potatoes which, from some cause or other, do not produce overground stems to act in this way, following the direction of their vital force manifesting itself in an off-hand production of tubers which grow at the expense of the other parts. Other tubers, however, the shoots of which were not so seriously attacked, did not fail to produce leafy stems, but in the case of a certain number of these the stems were

short and stunted and the leaves curled and marked with reddish or blackish spots. Others, again, had more vigorous and almost normal stems and pretty broad leaves, which, however, were mostly turning yellow or were similarly spotted. The produce of these tubers was almost nothing in some cases and very trifling or indifferent in others. For a long time this disease of the Potato, when it is only slightly developed, has been termed "*rouille*" or "*rust*," and when more fully developed it is known by the name of "*frisolee*" or "*curl*." It has been noted in France, Germany and England, in which last-named country it is called "*curl*." The description of its characteristics by old writers agrees in every respect with what I have stated about it. At the present day less attention is given to it because people are apt to confound it with the Potato disease, which is produced by *Phytophthora infestans*, and which it resembles in its effect of turning the leaves brown. In reality this "*curl*" disease is only one of the many forms of the leaf-browning disease. I think that, in order to escape this form of disease in kitchen gardens, the best way is to plant only sound Potato sets with an unbroken skin and without any brownish spots on either the skin or the shoots. Sprouted Potato sets have been recommended as the best for planting. This, in my opinion, is worthy of attention, as one can then, by examining the sprouts or shoots, ascertain whether or not the tuber has been attacked by the parasite. Another condition, however, will be necessary, namely, not to have in these kitchen gardens any fruit trees which usually harbour *Pseudococcis*, and of which the diseased leaves might infest the Potato crop. I may add that the Beetroot disease described by Payen in 1833 appears to me to have been also produced by this same parasite choking up the sap vessels of the root.

(2) **ORNAMENTAL PLANTS ATTACKED BY THE LEAF-BROWNING DISEASE.**—With M. Debray as my authority, I have already mentioned a certain number of garden plants which are more or less liable to be affected with this disease. I have myself observed some others suffering from it in various degrees, and these it may be serviceable to point out, as it must be remembered that the diseased leaves of these plants, strewn the soil as they fall, may be the means of spreading the infection of the parasite. The plants in question are *Hepatica triloba*, *Cynoglossum Omphalodes*, *Papaver bracteatum*, *Tradescantia virginica*, the Holly, Mahonia, Ivy, Begonia, Cannas, *Petunias*, *Epimedium alpinum*, *Helianthus*, *Aneuba japonica* (leaves and berries), *Tropaeolum majus* and *T. canariense*, the Lily of the Valley, *Stocks*, *Phytolacca decandra*, *Mirabilis longiflora*, *Echinochloa*, Spanish Sainfoin (*Onobrychis*), *Fuchsias*, *Anemone Pulsatilla*, *Salvia Sclarea* (stem or leaves), *Digitalis*, *Paony*, perennial *Lupin*, *Lycnis chalcidonica*, *Phloxes*, *Funkias*, *Asters*, *Cyclonia japonica*, *Deutzias*, *Astrantia major*, *Malope trifida*, *Montbretia*, and *Gladioli*. I have also noticed the parasite on the leaves of the Currant and some trees, such as the Oak, Beech, Hornbeam, Horse Chestnut, Sycamore, Elm, *Acer Negundo variegata*, and *Paulownia*, as well as on various kitchen garden plants, as the Artichoke, Cardoon, Sorrel, Melons (in frames), and Strawberries. Moreover, I have observed it on the seeds of Kidney Beans (various kinds), *Lupinus*, Broad Beans, and *Ricinus communis*. These spotted seeds often produced plants which were more or less affected with the disease. Lastly, the Vine, on which this leaf-browning disease was first noticed in the south of France, has not escaped its attacks in our own part of the country. I have noticed it in the discoloured leaves of Vines which, however, were only slightly attacked by it, and I cannot anticipate whether or not the disease may reappear this summer and with greater severity. Since the last sentence was written I have seen young bunches of Grapes which were suffering from the attacks of the *Pseudococcis*. In these, some of the berries were covered with small brownish specks, and the stalk was either similarly marked or else with

short brownish lines. I intend to watch the further action of the parasite on these bunches. In general, this parasite appears to act in such a restricted manner as not to completely destroy the growth of the plant which it attacks. On certain plants it is often seen only on the lower leaves which are in contact with the soil, the moisture of which may have rendered them more susceptible of being infected with the disease. It also depends on the fact that the ascending movement of the parasite is very slow either on the stems or on the leaves, and that it requires favourable conditions before it can keep pace with the growth of the plant on which it is preying.

(3) FRUIT TREES.—All the stone fruit trees are liable to be attacked by the Pseudocommis, and Plums are so in a less degree than Almonds, Peaches, Apricots, and especially less than Cherries. This slimy fungus can live on the branches of these trees, usually attacking the extremities of the young branches and causing them to decay sooner or later. When the sap-vessels of these branches are choked up by the plasmodes of the parasite, gumming ensues, and the upper part of the branch dries up and dies away. When the leaves are attacked they first show spots of a reddish or blackish brown colour. These spots are surrounded by a narrow ring of a darker colour, and as the diseased tissue shrinks or contracts they become detached and fall out, leaving holes in the leaves. These fragments of plasmodium-infected tissue, I am convinced, when washed into the soil by rain, serve to spread the infection of the Pseudocommis. The leaves of Apricot and Cherry trees in our part of the country were this year all more or less riddled with holes in this way. Even the fruit of the Cherry trees is attacked by the parasite, and when the symptomatic spots are large, the fruit makes little or no progress in growth, and the spots become covered with mould fungi. When the spots are small, the Cherry ripens, and the only effect of the spots is to leave very slight blackish depressions in the skin of the fruit. The fruit of Apricot trees attacked by the Pseudocommis suffers from it in another way. On such trees the Apricots are, unhappily, few in number, and fall from the tree before their time, one after another. Inquiring into the cause of the premature dropping and examining the lower part of the very short stalk which is detached from the tree along with the fruit, one may observe the orange-yellow or brownish tinge of the tissue at that part, and also that the ruptured sap-vessels there have the same tinge. Here I have detected the presence of the Pseudocommis, which causes the tissue to decay, so that the fruit cannot hold on firmly to the branch and is easily blown off by the wind. Moreover, if one of the wind-fallen Apricots is cut through, the stone or shell of the kernel will be found to be diseased, and the kernel itself to be usually wasted away. Pear trees and Apple trees have their leaves and sometimes their fruit also attacked by this Pseudocommis. In the case of the Pear tree the symptomatic spots are of a blackish colour, while they are of an orange-yellow or brownish tinge on diseased Apple trees. On the leaves of Apple trees I have observed that the disease was conveyed in a deposit of fine dust impregnated with plasmodes or microscopic cysts which had been formed on the surface of the soil by plasmodium-infected fallen leaves, and thence disseminated by the wind over neighbouring plants. The wood also of the Apple tree may be attacked, for I have seen the stem of a small tree the central part and bark of which had been the prey of the parasite. I may add that the young Apples which fall from the tree prematurely exhibit the same morbid features as the Apricots, except that in their case the entire fruit-stalk is attacked by the brown discoloration, which also shows itself on the bottom part of the young fruit, the flesh of which, although remaining firm to the touch, takes on a characteristic yellowish or reddish colour. The leaves of the Walnut tree are not exempt from the attacks of the Pseudocommis, and I have had an opportunity of verifying the

observations made by M. Debray on the leaves of this tree in Algeria. In our part of the country the disease exhibits the same effects in even disfiguring the leaflets sometimes. I have not seen any instance of the fruit or nuts being attacked by it. The Hazel nut tree is very liable to be attacked by the Pseudocommis, when the leaves turn brown at the margin or here and there on the blade, where sometimes it shows itself in very numerous and very small spots, and on other occasions in fewer and larger ones. The leaf-tissue thus attacked by the plasmodes of the parasite rapidly dries up, is broken away by the contraction which accompanies the desiccation, and falls to the ground, leaving behind it a hole in the leaf. This condition of the leaves being, as it were, quite riddled with holes, has been attributed to very different causes. The Pseudocommis also shows itself in broad spots of an orange-yellow colour on the involucre or husk of the nut, and the nut itself is finally attacked by it. What should be especially noted, however, is the dispersion and dissemination of the particles of the plasmodium-infected tissue of the spots which are carried about by the wind and infect the neighbouring vegetation. Cultivators, therefore, should be careful about planting near certain crops Hazel nut, Cherry or Apricot trees, or in general any kind of tree which is liable to be attacked by this parasite and would help to propagate it.

(4) CUTTINGS AND SEEDLINGS IN FRAMES.—From my experience in raising seedlings under damp bell-glasses, which has taught me that very few germinating seeds are proof against the attacks of the Pseudocommis. I was led to establish the fact that culture under frames is very favourable to the development of this parasite. While visiting the establishment of M. Foucard at Chatou, where the propagation of Pelargoniums or Geraniums is successfully carried on, I had an opportunity of ascertaining that the multiplication of these plants from cuttings is no longer as satisfactory as it used to be. Cuttings which at first appear to be doing well soon show signs of suffering from some malady. The leaves become spotted, the spots become covered with mould fungus, and the plants produce hardly any flowers. This is a special disease, well known to cultivators, and appears to be characterised by the presence of a brownish filament in the stem of the cutting.

M. Foucard kindly permitted me to examine some of the diseased plants, which I found to be affected in the following manner. The tissue of the lower part of the stem of the cuttings was entirely pervaded by the Pseudocommis, which had found an entrance at the cut surface, and which had also spread to several of the roots. I likewise found the parasite in some of the sap-vessels of the stem, and it is certainly from these that it spreads to the leaves and the flowers, in which I have also met with it. I did not come across any plants so badly diseased as to show the characteristic brownish filament in the stem, but I think I am able to say that this must mean a bundle of sap-vessels discoloured by the plasmodes of the parasite. Free and frequent ventilation, being unfavourable to the growth of the Pseudocommis, arrests the development of the disease, but the plants will still remain in an ailing condition and flower badly.

I will now mention some difficulties which attend the process of multiplication. In raising seedlings and striking cuttings under frames, it is necessary to be careful that the soil is free from contamination, for if the seed and cuttings are in a sound condition, the fault, if any, must rest with the soil. This amounts to saying that it should be sterilised before it is used. M. Opoix employed boiling water for this purpose, but cultivators find that this is not a very practicable method when a large number of frames has to be gone over. If the frames were made of iron or of wood lined with sheet iron, could not wood be burnt on the surface of the soil, and sufficient heat be thereby obtained to destroy any parasites it might contain? Or, could not gratings covered with burning charcoal be slowly moved over the sur-

face of the soil until it was sufficiently heated when the soil underneath could be turned up and exposed to heat in the same manner? I throw out these suggestions as they occur to me, but someone, perhaps, may devise other more efficacious plans for heating the soil in a frame such a degree as will destroy all the infective germs that it may contain. This being accomplished, all that would then remain to be done would be to prevent infection from being conveyed through the air by placing the frames at distance from any plant or tree attacked by the leaf-browning disease and likely to disseminate.

The foregoing are the fresh observations which I wished to lay before the society. The true cause of a disease being known, it may, perhaps be difficult, but not impossible, to discover an effective remedy for it. What we want in the present case is to make ourselves acquainted with the conditions which are favourable to the action and propagation of the parasite, and then employ the means which are necessary to minimise the risk if not to get rid of them entirely.—M. E. ROZE, *Journal de la Société Nationale d'Horticulture France.*

## GARDEN FLORA.

### PLATE 1143.

#### IRISES AND IRIS GARDENS.

(WITH A COLOURED PLATE OF—1, IRIS GEORGE THORBECK; 2, I. VARIEGATA AUREA.\*)

HERE are figures of two blossoms from an Iris border made about one year from the time of blooming, and although so short a time after the formation of the border, the general result is very pretty, but naturally one would expect a much better result in another year or two. The border was planted—as it ought to be perhaps soon after midsummer and throughout the early autumn, when Irises take pretty well.

The Iris is typical of various plants that most beautiful when grown in any good way arranged, above all things, with some kind of harmony and emphasis of grouping. One can anywhere about London see the poor Garden Iris struggling with tree roots in all sorts of conditions, and often half buried in the rubbish of which all the London gardens are full, and which has only one charm, namely, vigour, many of the things used being those that never produce a flower or a fruit worth looking at, like the Privet. Notwithstanding this very bad treatment, one may often see a plant in beautiful bloom about London in many little private gardens.

It is hardly necessary to say how much better in a country place and in good soils it can be done not only with the common Irises of the garden, but many varieties, or so-called hybrids raised between this and the allied species, which are among the most beautiful hardy flowers known to us. One object of making a border or garden is to get these together and to be able to treat them and enjoy them as a whole. The Iris appeared to us to have unusual merits for a border or garden of its own because of its graceful and almost evergreen leaves and of its good colour. In making such a garden border, one, of course, escapes the common error of letting things be choked by the common bushes we spoke of, as you are able to pay more attention and they have a fair chance of developing themselves.

Then comes the question of effect. To many people this may seem a matter of taste merely, but really there is much more in it, because of grouping or massing Irises the effect is very

\* Drawn for THE GARDEN by H. G. Moseley, at Gravetye Manor. Lithographed and printed by L. Godart.



TWO IRISES

1 I GEORGE THORBECK

2 I VARIEGATA AUREA



THE WEEK'S WORK.

HARDY FRUIT GARDEN.

ROOT-LIFTING AND ROOT-PRUNING.—Work of this description should be in a forward condition generally, but if through a scarcity of labour, or through other pressing matters, it has up to the present time been neglected, advantage should be taken of the open weather to make a start and press on with it. The advantages to be gained by the performance of either of these operations when necessary, having been stated in previous notes, it is unnecessary to again repeat them here. The great thing is to carry out the work with all due despatch, and while there is still a certain amount of warmth remaining in the soil, which will cause new rootlets to be made all the more speedily, or before any severe weather is likely to set in.

PLANTING.—For planting home-grown fruit trees and bushes the weather of late has been all that could be desired, as with one or two exceptions there has been an absence of dry, parching winds, while there has not been any very great amount of bright sunshine to cause the foliage either

readiness by the side of each if requisite, and then no delay will occur when the trees arrive. If the roots are found to be dry when they are unpacked, immerse them in water long enough to moisten every portion, and in no case should the trees be planted with their roots in a dry state. Should it not be convenient to plant them upon their arrival, lay them in by the heels and well cover the roots with fine damp soil, putting some long straw or the packing material on the surface, should sharp frosts set in, as a further protection. Trees which arrive during very severe weather are best placed in a cellar or potting shed, and the unpacking deferred until the weather breaks.

PRUNING.—I have in a previous calendar advised that fruit bushes be pruned and steps taken to clean the ground underneath, especially Gooseberries, where caterpillars have been rampant, and to do the manning of the plantations afterwards. Some growers are averse to pruning thus early, but there can be no objection to its being carried out now as the leaves are off the trees, unless it should be in localities where birds dislaid them very severely. Even in this case the difficulty is not insurmountable, as the bushes may be netted over so soon as the pruning is completed and the birds set at defiance. Where Gooseberry and Currant plantations are protected or covered with a framework of wire netting, or where birds give but little trouble, the pruning may be done at once. In pruning Gooseberry bushes, those from which the fruit will be gathered for preserving or cooking may have the wood left somewhat thicker than in those on which the berries will ripen and hang for dessert. Cut away all wood having a tendency to droop downwards, leave a young shoot here and there to provide for future contingencies in the shape of the loss of branches, and spur to two or three buds all surplus wood. The young wood at the extremities of the branches may be cut close, or left one-third or two-thirds its length, according to the age and size of the bushes. Cordon trees should have all side growths pruned in close, merely tipping the leader or cutting it back to a sound bud if required for future extension. Red and White Currants succeed best spur-pruned, and the centre of the bushes should be kept open for the free admission of light and air. In their case leave young growths to supply possible losses in the near future. Cut away all pendant branches and encourage the bushes to grow more in an upright than in a spreading manner. Both Gooseberry and Red and White Currant bushes should be grown with clean stems, quite a foot high before they are allowed to branch out, and all growths emanating from the base in the shape of suckers should either be pulled or cut clean out. This should be borne in mind when pruning young trees, and leave the shoots for the formation of future branches at regular intervals, giving those the preference which point upwards, so that cup-shaped bushes will eventually be the result. Cordon trees should be treated the same as cordon Gooseberries. Black Currants must be thinned out instead of being spurred, and the oldest of the wood cut out at the same time. If this is done annually they will be kept in a fruitful state with but little trouble. Where the Currant mite has been troublesome, and for which the only remedy appears to be the rooting up and burning of the bushes, new plantations should be formed on a piece of ground as far removed as possible from the infested plantation. New bushes should be obtained from a clean source, and pains taken to see that nothing is likely to occur which may convey the insects, either in the shape of soil or portions of infested wood, to them. As a further precaution, the ground, after the old bushes are grubbed up, may be dressed with gaslime, which, if spread on the surface and allowed to remain there all the winter, may be dug in in the spring. As the leaves are nearly all off Morello Cherries, with the sweet varieties, Pears, Plums, and Apricots following suit, the pruning, dressing, and training of these may be undertaken in the order named. The few leaves there may be remaining on the trees may be brushed off without the

natural; we have to plan with some deliberation. We study the conditions that suit them and we get a picture which cannot be got by the common dotting way. It is not merely a matter of taste, therefore, but a returning to more artistic and natural ways, both of culture and effect. The variety of Irises is very great and finds itself very well to the making of a bed or border. The times of blooming vary. The variety of the hardy rhizomatous Iris in particular is very great, whilst other and rarer distinct species may be introduced among them. In sandy, peaty, and warm soils the various dwarf Irises form pretty and good edgings, some flowering very early.

No one need fear monotony from such an arrangement, the variety and grace of the plants exclude it, and we are not obliged to confine the border or bed to Irises alone. Some other hardy bulbs, such as the Gladioli, may be associated and grouped with the Iris, and the sult will be good, open spaces being left for its purpose in case we wish to put any half-hardy bulbs in in spring. It is needless here, as



Spanish Irises in an American garden. From a photograph sent by Mr. Hicks Arnold, 7, East 83rd Street, New York.

we have done it so often, to enumerate the various kinds of German Irises that are beautiful; they are mentioned in so many catalogues, and we have often dealt with the question before as a whole. The two kinds we figure are, it need hardly be said, very pretty ones.

**Aster sericeus.**—This distinct and beautiful species is somewhat rare in cultivation, though on the singular beauty of its downy silken leaves it is worth a place in all gardens. The other thin and wiry habit, as well as the leaves, covered on both surfaces with a pronounced very pubescence, render it unique. The blossoms, of a pale violet hue, are likewise very distinct, and, being a late-flowering species, it should be more encouraged. Hitherto the plant has been somewhat rare. The plant should be grown in a warm position in a light, open mixture of sand and leaf-mould. In some text-books this species is described as half-hardy, which is scarcely correct, the plant being quite hardy in the majority of soils, though not a success on a soil of a clayey and retentive nature.—J.

to flag severely or to shrivel and drop prematurely. Consequently both trees and bushes have been but little distressed, and they will shortly be shedding their leaves, but not before these have been of great service in assisting and promoting the formation of fibre at the extremities of the majority of the roots. Where, through force of circumstances, a start has not yet been made with planting of home-grown trees, I would urge that it be taken in hand at once, for although a week or so of valuable time has already been lost as far as the speedy re-establishment of the trees is concerned, fruit trees planted during November always succeed better than when planted either in the dead of winter or in early spring. As fast as the trees are planted, stake and tie all that require it, and above all do not omit to mulch, as this both conserves warmth and excludes cold in the shape of frost. Judging by the ripening of the foliage on fruit trees, nurserymen should be in a position to commence lifting somewhat earlier than usual this season, which will be an advantage to both grower and purchaser. Have stakes, haybands, tying material, and other accessories to hand, in addition to having the holes dug and a modicum of good soil placed in

slightest harm resulting, and the performance of the necessary operations named above can then be done much more expeditiously, and with greater comfort to all concerned than if deferred until mid-winter.

**OUTDOOR FIGS.**—In those parts of the country where it is necessary to afford the trees protection during the winter, the matter better have attention as soon as the trees have shed their leaves. The best material I have found for this purpose is dry Bracken, held in position with mats. The branches should be unfastened and tied into convenient-sized bundles, and the latter lowered and brought to as near the ground-level as possible, when the Bracken can be worked between and around them, covering afterwards with mats, which should be fastened to the wall. This is an effective and economical method of preserving both the embryo fruits and wood from the frost.

**PROPAGATING.**—After the Currant and Gooseberry bushes are pruned, collect the desired number of cuttings of each particular variety, tie them in bundles and correctly label them. On a wet day these may be prepared, heeling them in under a north wall afterwards, so that the wood does not get dried, and plant them on a piece of ground or a border prepared purposely for them the first opportunity. Cuttings made and planted during the present and succeeding month root more quickly, and there is a smaller percentage of losses than when the matter is left over until the spring. A. W.

#### KITCHEN GARDEN.

**VACANT GROUND.**—The importance of getting all vacant ground dug or trenched early in the autumn is not always recognised. It is not in all gardens, however, that ground required for most of next summer's main crops can be allowed to remain vacant during the winter, as the space available may be barely sufficient to produce enough vegetables to meet the demand, and close cropping has to be resorted to. There are two good reasons why the soil, especially that of a heavy nature, should have early attention in the autumn, namely, not having become saturated by heavy rains, it allows digging to be done with a less amount of labour, while, being exposed for a long season to the weather, it becomes thoroughly pulverised and sweetened. To this may be added the further advantage that less labour is required in spring to bring it into a suitable condition to receive seeds and plants when many other matters claim attention. It too often follows that the old rule of tillage is never departed from, such as an annual dressing of light strawy manure, which is barely buried by the shallow practice of digging. Under such treatment it is little to be wondered at that such crops as Peas quickly collapse after a short spell of hot, dry weather. The manure employed possesses little or no feeding properties, while on light sandy soils it only causes them to become more porous and facilitates the escape of moisture. A change from shallow to deep cultivation often proves of greater benefit to future crops than an extra application of manure. The top spit may, and often does, become manure-sick, and lacks those holding properties necessary to support growth during a trying season. Double-digging in such cases proves a great gain, especially when the work is done in such a way that the soil from the second spit becomes thoroughly incorporated with the top. On some soils this is much preferable to trenching, as in this case the subsoil which is made to form the surface is of an ungenial nature, becoming hard when exposed to the sun and unworkable after rain. This shows that the cultivation must depend on the nature of the subsoil. Light and porous soil requires deep cultivation and more feeding than that of a heavier nature, as the manurial properties are more quickly exhausted. Those who have cold, retentive soils to deal with know the value of liberal dressings of road grit, burnt garden refuse, or even fine ashes. These form a natural drainage,

and when porosity is once attained warmth follows. Until such ground has been brought into this condition it may prove a disadvantage, rather than the opposite, to be heavily charged with rank manure. Ridging is a practice strongly recommended, especially with heavy land, as in no other way is it exposed more to the influence of the weather. Spits that are turned over roughly now, though they may cling to the spade, will invariably crumble to pieces when March winds follow severe frost. Many have to resort to this method when preparing for Potatoes. The ridges are formed of sufficient width to allow of the sets being placed between them in April. In this way large breadths are soon planted, and the soil having been brought into a friable condition is easily levelled, and growth pushes through freely.

**DRESSINGS FOR LAND.**—Really well-decayed farmyard manure is anything but plentiful in many gardens, but there is generally to be found a large heap of weeds and rubbish, the accumulation, probably, of twelve months. This, after being turned over perhaps a few times, forms the chief dressing available. When properly prepared it proves of great assistance to most crops, but unless sufficient time has elapsed to destroy the seeds of innumerable weeds, it should be strictly avoided, or a foul garden will be the result. A cartload of lime to every six of refuse, and the whole turned over several times for a couple of years at least, will bring it into a suitable condition for use, the finer portions of which are invaluable for seed beds, &c. Unless it can be treated in this way, the only thing to be done is to burn it. This will reduce the bulk considerably, but there are no evil results likely to follow when used sparingly. The same care should be exercised in preparing stable manure before it is used in the garden. This does not consist wholly of straw and droppings, but waste hay and the sweepings of lofts are generally mixed with it, these proving a fruitful source for the introduction of dock and other rank weeds, which would take years to eradicate when the seed is once allowed to germinate. Nothing but fermentation will destroy these, which should be brought about by turning the heap several times, to prevent dry rot and cause the whole to decay before being used. Now is the best time to apply gas-lime where it is deemed desirable for the destruction of slugs, wireworm and other vermin. It is too powerful to be used just previous to seed sowing, hence ground that has to carry a crop of Onions next year should be dressed with this now. It should not be dug in for several weeks, full exposure causing the lumpy portions to fall to pieces. Used with care this is a great purifier of the soil, but when employed too freely and just before the ground is cropped it may lead to loss and disappointment. RICHARD PARKER.

## ORCHIDS.

### MILTONIAS.

This genus consists of a large variety of plants, some of the species having scores of named varieties, though the number of actually distinct species is small. They are epiphytal plants, natives of South America, some of them being of close tufted habit, others having the pseudo-bulbs occurring at varying distances on short creeping rhizomes. Their culture varies a little in the different species, the candida, Clowesi, cuneata, and Regnelli varieties being, perhaps, the easiest to grow and flower well. These like a good sound description of compost, consisting of peat fibre cleared of every bit of sand and earth with sphagnum in about equal proportions. Mix with this plenty of very finely broken crocks and charcoal, but not large lumps. The roots are small, and though liking a compost that air can enter freely, they are not so satisfactory if it is too loose. In choosing the pots let them have a medium margin of compost, and let this be pressed very

firmly, first filling the lower two-thirds at least with drainage material. For a little while after repotting it is not advisable to keep the compost very moist, though it needs frequent watering, owing to its running dry so quickly, but after this the roots must be kept very moist until the young pseudo-bulbs are quite finished. Even in winter they must be kept moist, requiring even then as much moisture as some Orchids do in summer. The best position for this class of Miltonia is a light one in the Cattleya house, but not where direct sunlight can reach the plants. The plants vary considerably in their time of flowering and resting, *M. Clowesi*, for instance, flowering sometimes in July and August, at others in December, and this will of course be kept in mind in all cultural operations.

Quite a distinct section is that comprised by *M. spectabilis*, *M. Moreliana* and *M. anceps*. The pseudo-bulbs occur on stout creeping rhizomes and the roots are small, though very persistent in most cases. One and all in this class abhor anything like closeness in the compost and also dislike much material about the roots. On trellised rafts or in shallow baskets they are usually satisfactory, and they may with care be grown in well-drained pots. About an inch of material is ample for small and medium-sized plants, and this may consist of a similar kind to that mentioned for the *Clowesi* section. Where roots are fairly plentiful they may easily be fixed in pots or baskets, but badly-rooted ones are more easily accommodated on rafts, as wire may be used for fixing them. Very little difference is needed in the summer and winter temperature for these Orchids, and they thrive well in the cooler part of the Cattleya house. Plenty of water is needed while growth is active, and while at rest the compost must be kept just moist. Nearly all the kinds mentioned above have a pale yellow tint in the foliage, but this is quite natural to most of them and not a sign of ill-health. *M. cuneata* is greener—in fact, it should be of quite a deep green if perfectly healthy—but the others, and especially *spectabilis*, will always be poor in colour. *M. vexillaria*, *M. Roezli* and *M. Phalenopsis* used to be included in *Odontoglossum* by botanists, but they are now usually called *Miltonia*. The first-named is one of the grandes of Orchids, and so well known that no description is needed, and its culture may be said to present no great difficulty. It does best in medium-sized pots, in a clean, well-divided medium, not heavy enough to get close or to hold moisture unduly, yet fairly substantial. I should be repotted some time after growth commences, just as the roots are forming, and until this occurs they may be kept well on the dry side after blooming. When the young pseudo-bulb are finishing and the bloom-spikes forming, the plants require plenty of moisture. An intermediate or Cattleya house temperature suits it best, the growth and flower being much finer than if grown in a cool house. Much the same treatment is needed by the other two kinds named in this class, but both of these do with more heat all the year round than *M. vexillaria*. A short description of the leading kinds is given:—

*M. ANCEPS* is a dwarf and pretty kind, the pseudo-bulbs a couple of inches in length and leaves of a pale yellowish green. It produces its blossoms singly on the scapes, and these are olive green and brown of varying shades, with purple markings on the outer segments, the lip being white, spotted and barred with red. It comes from Brazil, whence it was introduced in 1851, and is by no means a common species.

*M. CANDIDA* is a useful, free-flowering and easily grown kind, and in its best forms one of the hand-

most of autumn-flowering Orchids. It bears spikes of blossoms, eight or nine on each, these being large individually. The sepals and petals are yellowish, barred with reddish brown, the lip pure white in the typical form, but having many variations. It is a native of Brazil, and was introduced in 1830.

*M. CLOWESI* is not unlike the last named in habit and general appearance, and thrives under similar cultural conditions. The blooms are large, the scape many-flowered, the outer segments chocolate-brown with spots of yellow. The lip is almost heart-shaped, pure white in the front, the base a deep vinous purple. This is not so variable as some other kinds, yet there are many which have received varietal names. This also comes from Brazil, and was introduced in 1843.

*M. CUNEATA* is one of the best known kinds from the same country. The spikes bear about half a dozen flowers, these being prettily undulated on the sepals and petals, brown and green in colour; the lip white, spotted with rosy purple. Its proper flowering season is in early spring, but sometimes blooms again in autumn.

*M. MORELIANA* is a beautiful species, usually classed as a variety of *M. spectabilis*, but there are so many sub-varieties that it seems quite entitled to be kept apart. The spikes bear single flowers in late autumn, these being large, deep purple on the sepals and petals, the lip lighter, often with radiating lines of a deeper hue. The varieties differ considerably in colour and size, the flowers of the best forms being each over an inch across.

*M. PHALENOPSIS* is a charming Orchid, not exactly easy to grow, yet often seen in a thriving condition where care is taken in its culture. It is a dwarf tufted plant, with pale green arrow leaves and pseudo-bulbs, the scapes rising from these and carrying a few flowers on each. These are white, with lines of purple in the centre of the lip. It occurs naturally at considerable elevations in New Grenada, whence it was introduced in 1850.

*M. ROEZLI* and *M. VEXILLARIA* are very nearly related kinds, both lovely in bloom and well worth very care to bring them to perfection. The former bears pure white flowers with a purple centre, and there are several named varieties.

*M. SPECTABILIS*, the type of the genus, was introduced in 1837 from Brazil, and is still one of the most useful Orchids grown. The single-flowered scapes rise about 8 inches high, the outer segments are white at first, afterwards becoming a pale yellow, the lip varying considerably in the different varieties, but usually being of some tint of purple.

*Lælia autumnalis venusta*.—This is a pretty variety of the large-flowered, pale-tinted section. The bloom-spikes are stronger and stouter than those of the typical form, producing more flowers on each, these being individually large and of great substance. The segments are broad, of a pretty rosy mauve, the base of each being nearly pure white. The lip is broad and handsome, but not so deeply tinted as in the type. It thrives well under the treatment usually recommended for the type.

*Masdevallia tovarensis*.—The earlier flowers of this Orchid are now open, and as it keeps up a succession of the snowy white blossoms for about three months it is of great value either as a pot plant or for cutting. It is not good policy to cut the spikes entire unless they are wanted with long stems, but no great harm is done by taking off a few in this case. It is quite as easily grown as any in the genus, though it undoubtedly likes rather more warmth in winter than the *M. Barryana* varieties. It is a native of Caraccas, and first flowered in England in 1864.

*Masdevallia corniculata*.—I have noted this pretty species in bloom in several collections around London during the week. It is a free-flowering and very bright and effective, the base of the flower consisting of the ovary, and part of the tube is enveloped in a green bract.

The base of the segments is brownish-erimson suffused with yellow and some deeper-coloured spots; the tails of the sepals are narrow, clear orange-yellow. There is considerable variety among the flowers, some being much smaller and paler in colour than others.—R.

*Masdevallia Veitchiano-Estradæ*.—This is probably one of the most free-flowering *Masdevallias* in cultivation, small plants of it being covered with bloom. The name signifies the parentage, the latter being the seed-bearer, and it was raised in Captain Hinek's collection at Richmond. In habit it most resembles *M. Estradæ*, but the influence of the other parent may be seen. The blossoms are larger than those of *Estradæ*, the perianth bright orange, suffused with scarlet, the elongated tail bright orange-yellow, the lip purple. This bright and pretty hybrid first flowered in 1893.

*Masdevallia muscosa*.—This very singular *Masdevallia* was first imported by Mr. Bull, one of whose collectors found it in New Grenada, and there are now several plants of it in flower in his Chelsea nursery. It is the only known species having a sensitive lip, and is very interesting on this account. Directly the lip is touched it begins to move upward, and at last closes up under the column. It is also peculiar in its very hairy stems, these being covered with a soft white down. The whole of the flower, with the exception of a chestnut-brown blotch on the lip, is clouded white.

*Mesospinidium vulcanicum*.—This bright and pretty plant is in flower at Mr. Bull's. It is of dwarf habit, each pseudo-bulb about 3 inches high, and the spikes producing about a couple of dozen of the charming little rosy-red blossoms. These vary in size considerably, and to a certain extent in colour and the number produced on a spike. Coming as it does from Peru, it thrives with the cool section of *Odontoglossums* in a moist, shady, and well-ventilated house, kept as cool as possible during the summer months and at a minimum of about 50° in winter. Peat and moss suit it well for compost, and small pots are preferable to large ones.

*Cymbidium elegans*.—The flowers of this species occur on elegant racemes, and are individually very pretty. The plant is strong and of vigorous habit, producing long sword-shaped leaves that in themselves are very ornamental. The flowers are rather crowded on the spike, and seldom open quite fully. They vary from nearly pure white to a tawny orange colour, and are spotted about the lip with bright crimson. It does well in pots in a good substantial compost, and is best suited in an intermediate temperature. A fine plant of the giganteum variety I recently noted in bloom.—R.

*Cattleya aurea*.—This does very well at Camberwell, and Mr. Chapman considers it one of the easiest of *Cattleyas* to grow. The specimens are small, but the bulbs in every case are improving in size, one nice growth carrying a three-flowered spike, the blossoms large and fine in colour. Few things are more beautiful than the labellum of this species, the rich purple, with golden overlying blotches and pencillings, being remarkably handsome. Doubtless the cardinal points in its culture are a good light position and comfortable quarters while growing, care being taken that the basal buds do not start after flowering, but remain dormant during the winter, when they start and grow rapidly in spring.

*Cycnoches maculatum*.—This pretty species, although known since 1839, has always been somewhat scarce in cultivation. Mr. W. Bull has imported it, I believe, and a fine spike of it was recently in flower at his nursery. The plant has rather short pseudo-bulbs for a *Cycnoches*, these tapering upwards. The plant had one spike of eleven flowers, these being rather thickly set and making a full and pretty arching inflorescence. The sepals and petals, which reflex, are narrow, buff-yellow with crimson spots. The labellum is very singular, being greenish, the

disc cut up into many small white filaments, each having a distinct black dot on the top. It is a native of Mexico, and requires the same treatment as *C. chlorochilon*.

*Cattleya Miss Williams*.—This is a distinct and pretty hybrid raised in Mr. Temple's garden at Leyswood, Tunbridge Wells, where it has recently been flowering. The petals are broad, the colour being a distinct tint of rose. The sepals also are fine in substance, similar in colour to the petals. The front lobe of the lip is rich purple, shading to white at the base; the side lobes white, slightly tinted with rose, with some yellow at the base. The parentage is unknown, but there is no doubt *C. Loddigesii* was the seed-bearing parent, the other, one of the *C. labiata* group. It is a desirable variety, and when stronger promises to be a useful addition to the *Cattleya* hybrids.—H. J. CHAPMAN.

#### NOTES ON ORCHIDS.

THE dullest season for Orchids—thanks to the fine weather, that has brought many autumn flowering kinds in very quickly—is now past, and the flowering house is very gay. Of the splendid *Cattleya labiata* little need be said, as its characteristics are now so well known. Then the earlier plants of *Dendrobium Phalenopsis* are making a fine show, as well as *D. aureum*, *D. chrysanthum*, and one or two others. *Cattleya Gaskelliana* has held out much longer than usual, while *C. bicolor* and a few of the *C. Loddigesii* section have this season joined hands with *C. Bowringiana* and its varieties. Several plants of *Cypripedium Charlesworthii* are still in good order, also of course *C. Spicerianum*, and the number of hybrids just now flowering is very large. In the cooler houses there is a wealth of bloom, *Oncidium tigrinum* with its charming violet-scented blossoms being one of the finest in the genus, and I have seen several plants of *O. Marshallianum* already in flower. *Odontoglossums* are not yet numerous, but a few *O. crispum* are out, also the useful *O. tripudians*, not a large, but a very showy plant. *Masdevallias* of the *Chimera* section include the type, *M. Wallisi*, *M. nycterina*, and one or two more, while the white *M. tovarensis* and many quaint botanical kinds help with the already numerous hybrids to form a pretty picture.

It is not perhaps the best time to be pulling *Cattleyas* about at the roots; still where it is necessary that such as *C. Mossiae*, *C. Bowringiana*, or even *C. labiata* are about producing a fresh set of roots, they may with advantage be seen to, especially in districts where fog is apt to destroy the flowers. *Dendrobiums* are finishing up this season in a manner very pleasing to those growers who have had experience of dull, sunless autumns. All the crassinode, *Wardianum*, and similar varieties that have been hanging in a cool, light house are rapidly losing their foliage, while *D. nobile* is quite finished and the nodes swelling for flower. Small bits of the latter and any fine forms that have been propagated by being laid on Moss or similar material may still be potted up. A recent visit to a very skilful propagator was instructive. Cocoa-nut fibre had been used in place of Moss, and apparently almost every node had produced a plant. As those operated on were of such fine varieties as *D. n. Ballianum*, *D. n. nobilium*, and the like, the value of this mode of propagation may be imagined. Later *Dendrobies* will need a little more time, and must be kept in company with such of the Australian kinds as are making their growth in a warm, moist house. *Thunias* should by now have lost their foliage, and may be turned out of their pots and placed in any out-of-the-way corner in a warm house. All or nearly all the warm-

house *Cypripediums* are in active growth and must be treated accordingly, giving plenty of water at the roots and a genial, moist atmosphere. *Catasetums* and *Cyanoches* as they go out of flower should have the bulbs well ripened up and be kept dry for a time, but any that are still in active growth must be pushed along as quickly as possible. In the *Cattleya* house many of the *Oncidium*s are throwing up their spikes, the useful *O. Cavendishianum* being among the number. A good light and a fair quantity of moisture must be allowed them, and where there is an opportunity the plants may be fumigated, as otherwise green fly is almost sure to put in an appearance during the winter season.

Shading may now be entirely dispensed with, as it is imperative that all the light possible enter the houses. For this reason the glass should be frequently washed down outside, especially after foggy weather, and the inside of all the houses should be thoroughly sponged, both woodwork and glass coming in for attention. Whenever time can be spared, sponging should be followed up in the *Cattleya* house, as the small white scale insect soon spreads at this time of year. Especial care is needed where newly-imported plants are introduced among well-established ones, as these are often covered with insects, that increase directly they are brought into heat. In the cool house, too, much more time will need to be spent in cleaning both the house and its occupants, a soft brownish scale and also the black scale with a white marking around the outside edge making a lot of progress just now. It is, perhaps, not generally known that fumigation will nearly exterminate this latter pest, greatly reducing its numbers, if not actually ridding the house of it. Keep the growth moving on *Odontoglossum crispum* and any similar kinds that have not yet finished up their bulbs, and as *Masdevallias* and others root out into the new material increase the water supply. Repot *Pleiones* as they go out of flower, keeping them absolutely dry at the roots after the first soaking to settle the new soil. Keep *Sophronis* and other dwarf *Orchids* advancing for flower in a nice equable state as regards root moisture, and while allowing as much air as possible to this house keep it free from draughts. The minimum night temperature will now be in the East India house 60°, in the *Cattleya* house 55°, and in the intermediate, Mexican, and cool houses from 50 to 55°. R.

#### SHORT NOTES.—ORCHIDS.

*Lælia pumila albens*.—In this the sepals and petals are pure white, of fine form and substance. The lip has a rich band of purple around the front lobe, the side lobes white, shading to yellow at the base.—H. J. C.

*Lælia Perrini* var. *leucophæa*.—This is a distinct and pretty variety of this well-known species. It differs principally in the colour of the flowers, the sepals and petals being white, slightly tinted with delicate blue; the lip white with the exception of the front lobe, which is of a distinct slate colour. It is similar in colour to *Cattleya Mossie* E. Ashworth and *L. præstans* (Gatton Park variety). The above plant was recently in flower in Sir F. Wigan's collection, Clare Lawn, East Sheen.—H. J. C.

*Masdevallia Measuresiana*.—This is in fine condition just now at Camberwell in Mr. Measures' collection. It is a hybrid between *M. amabilis* and *M. tovarensis*, and while retaining the habit of producing flowers successively like the latter, only one is open at a time. In habit and general characteristics it is about intermediate between its parents. The blossoms are white at the base of the perianth tube, the lower part of the sepals being suffused with lilac, becoming much deeper towards the margin and in the middle veins.

*Catasetum Chrietyanum*.—A small plant of this extraordinary species at Mr. Bull's is carrying

three of the largest flowers I have seen. It would appear that, like *Cyanoches*, the *Catasetums* when they produce a few flowers only on a spike have them larger individually. The blossoms are marvellous in their structure, the green sensitive horns to the column having a curious likeness to a diminutive pair of legs, one pointing forward, the other back, as if in the act of walking. Both sepals and petals are brown with darker spots, the lip being green shaded with purple.

*Cypripedium Reginae*.—This is an extremely pretty hybrid, raised by crossing *C. Lecanum* and *C. Fairrieanum*, and it combines in a marked degree the good qualities of both parents. A very fine plant now in flower at Cambridge Lodge has six growths. The foliage is deep green with very light tessellations. The drooping petals are pale in ground colour, with lines of an almost transparent brownish red. The dorsal sepal is bright green at the base, white above, and covered nearly to the apex with small spots. The

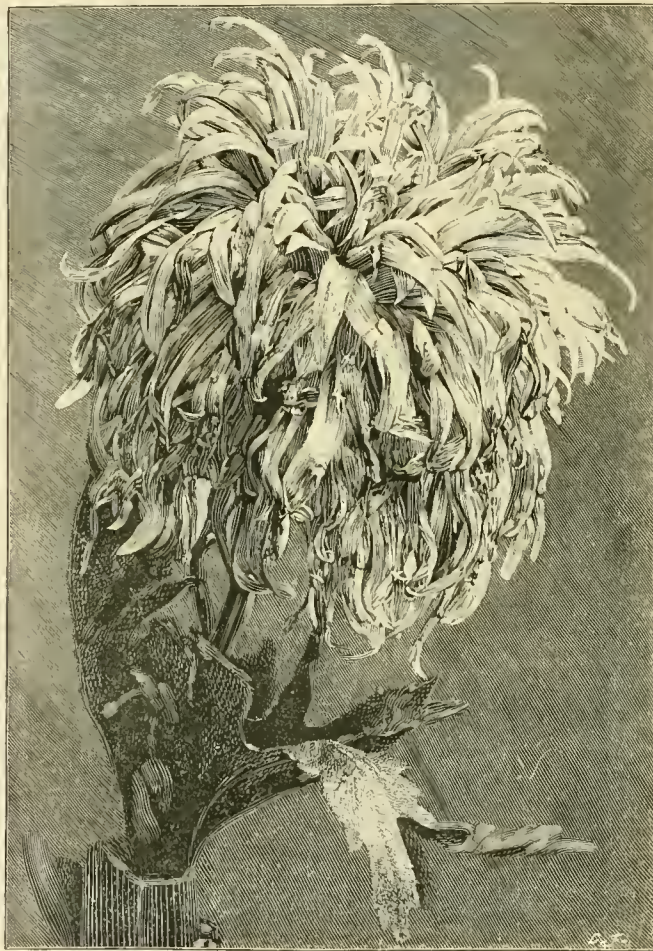
broad purple band down the centre, which is a characteristic of all the *C. Spicerianum* hybrids. The ground colour of the petals is greenish yellow suffused with purple, heavily spotted and lined with brown, the lip green heavily suffused with chocolate-brown. It is the result of crossing *C. Spicerianum* and *C. Curtisi*, and was raised in the collection of Sir F. Wigan, Clare Lawn, East Sheen.—C.

## CHRYSANTHEMUMS.

### TYPES OF JAPANESE CHRYSANTHEMUMS.

The varied shapes of this class, in addition to the rich colouring, have been the means of making them so popular. In beauty as well as ease of culture the Japanese are the finest of *Chrysanthemums*; they appear, indeed, to be gradually ousting every other class out of cultivation. Among the predominating types, perhaps the drooping or tasselled form is that esteemed more generally, and I think, too, sorts of this type are the least difficult to grow. *Mlle. Lacroix* was, perhaps, the first of this charming form. Ten years or so ago this variety was exhibited in splendid condition. New ones, however, eventually superseded it, being larger, and we now rarely note it in first-class selection. The *Belle Paule* became the highest form of the type.

Beautiful blooms of the white and rose-edged kind were for several seasons the fore. *Triomphe de la Rue des Châlets* was another extra fine type of the drooping-petalled bloom; the colour of this a brick-red or terra-cotta was most distinct. It is a pity such a kind has gone out of cultivation. But somehow, after a few seasons' culture for the purpose of obtaining huge exhibition blooms, grand varieties develop some undesirable characteristics and are therefore cast aside for some new-comer that can be more easily grown. *Mme. Carnot* is the present-day ideal of the droop-



Japanese *Chrysanthemum* *Mme. Octavie Mirbeau*.

pouch, light yellowish brown, is like that of *C. Lecanum* in shape.

*Lælia purpurata* var. *Annie Louise*.—This beautiful variety has recently flowered in the collection of Mr. G. W. Law-Schofield, Newhall Hey, Rawtenstall. The sepals are white in the centre, becoming slightly suffused with rose towards the edges. The ground colour of the petals is white, suffused with rose and heavily veined from the apex to two-thirds its length with a deeper shade of rose. The large lip has a broad band of deep crimson purple from the front. This colour is also extended well over the side lobes, shading to bright yellow, lined with the purple of the front lobe at the base and through the throat. It is a distinct and desirable form.—H. J. C.

*Cypripedium Allanianum* (Clare Lawn variety).—This is one of the most attractive forms of this lovely hybrid I have seen. The dorsal sepal is white, suffused with deep rose at the top, and green suffused with brown at the base. It has an unusually

ing type. This is undoubtedly a very handsome *Chrysanthemum*. It may easily be overgrown; hence by being too kind in the matter of manures many fail with it. *Vivian Morel* and its sport, *Charles Davis*, are well known examples of the tasselled form. *Mme. Octavie Mirbeau* is after the style of the old *Belle Paule* both in colour and form. This variety, too, is an exceptionally good one to last. It is charming with an edge of rose colour to the florets on a white ground. *Edith Tabor* has a bloom of most distinct formation. The long florets droop, only the tips pointing in an upward direction. This characteristic, with the clear yellow colour and substance, made it to my mind as a show flower the most finished and handsome *Chrysanthemum* in existence.

neeb perfects blooms of a drooping habit, at the florets are shorter than in many of the po. Mme. Marius Ricoud is somewhat similar form. Sunflower is a perfect form in the scelled flowers, but is a trifle small for growers to-day. Miss Dorothea Shea is another pital example; so is Wm. Seward. Simplicity long the newer kinds will please lovers of ooping-petalled Chrysanthemums.

A form scarcely less beautiful is the broad reading bloom. Mutual Friend and Golden ate are first-rate types. Another is M. Chenon Léché. Australie and Col. W. B. Smith ve a formation quite their own, and most ndsome, too. They build up into a ball-aped, loosely-formed mass of petals, but the ints, curiously, turn in a downward direction. hese appear to me perfect examples in the y of Japanese Chrysanthemums. The real in-eriving type in this class is also a very beautiful e. Take a good bloom of Mme. Ad. Chatin; is noble in formation. Oceana, although not se close in build, is grand; its petals also e thick and massive. Modesto is a grand rving flower, apart from the richness of its ide of yellow. Pride of Madford is a fine oe, the petals being extra broad and rich. ost handsome forms are M. Panckouke and hat's Australian Gold, characteristic flowers ring long florets which weave in an upward ection, and finally produce an irregular ball-aped mass of soft, dainty colour. Thunberg in old variety not beaten in this form when ll grown.

The above are the more striking types. ers of intermediate shapes are not wanting— e reflexed, in which one petal is laid upon other in a somewhat formal way. These, if nly coloured, are desirable. The hirsute or rry-petalled kinds, again, are curious, and rners are striving to obtain other forms as rse as those mentioned. There is one type e the Japanese flower I cannot see any beauty i that is the quill-petalled bloom. The florets i such are closed, as it were, and exhibit t outward colour only, which is usually dull. ese long petals remind one of the porcupine or hgehog, and have as much grace in forma- t. H. S.

**Chrysanthemum N.C.S. Jubilee.**—This is an especially pleasing new variety. The oms are full, deep and well formed. Its t of colour may be described as heliotrope, soft d charming. The florets are broad and long, u much substance. Add to these merits a erf, sturdy habit. It is one of M. Calvat's sts of the present year, and will be highly prized w better known.—H.

**Chrysanthemum Vicomte Roger de Che-** zes.—This recently certificated variety is an usually tall grower, and on that account will e disappointing to many. Nor are the flowers of e-rate merit. Probably the blooms, which e exhibited in a mass of a dozen, looked more ings than three would have done—the number el National Chrysanthemum Society requires; at hence the committee may have been carried ay by bulk. But even as seen, we have many ber yellows. This is not really the natural e of the flowers of the variety. It is quite bzy, with a spreading form. When the early k bud is secured, it develops the yellow shade d becomes somewhat incurving in shape. H.

**Chrysanthemums at Fawkham.**—Mr. P. Waterer, whose handsome vase of twelve ms of Mlle. Marie Hoste won the gold medal ed by the National Chrysanthemum Society merica on the occasion of the National Chry- anthemum Society's jubilee show last year, has y nice lot of blooms almost fully developed. Majority of the blooms are of good size, even for, and in many instances bright and rich in

colour. The collection numbers between 250 and 300 plants, and contains a goodly number of the most promising novelties of last season. Hand- some blooms of Emily Silsbury, the beautiful white Japanese somewhat resembling Mlle. Thérèse Rey, and here distinctly superior to that variety; Matthew Hodgson, a brilliant crimson- red, not by any means large, but valuable for its colour on the exhibition board; Miss Elsie Teichmann, pearly white and very graceful in form; Modesto, undoubtedly one of the best deep rich yellow sorts of recent introduction; Mme. Carnot, and Australie, the largest of the Japanese incurved, rosy amaranth, with white reverse, were good. Queen of the Buffs was as fine as we have seen it, the blooms being very deep, yet distinctly fresh and clean. A. H. Wood, the beautiful yellow sport from Primrose League, was seen in all stages, some of the later flowers giving promise of making blooms of exceptional grace and beauty. Pride of Exmouth, on both late and early buds, was striking, the later buds giving a pretty tint of rosy pink on the long, broad petals. Many of the older standard sorts were represented in excellent condition.—C.

CHRYSANTHEMUMS AT SWANLEY.

MESSRS. H. CANNEL AND SONS have in their large show-house, 160 feet x 25 feet, an extensive and thoroughly representative collection from all sources of the popular autumn flower. The quality of the blooms is of a high order of merit. The plants are arranged with considerable taste, there being a group of low dwarf varieties round the sides of the house, with a wide, sloping central bank of plants having two faces. A large proportion of the varieties are unnamed seedlings on trial, then a number of quite recent introduc- tions, with a fair sprinkling of old-established, well-proved varieties.

Continental novelties were strongly represented, by far the best and finest in every sense of the word being those sent out by M. Ernest Calvat, whose numerous successes on the Continent last year led us to hope, and not apparently in vain, for many varieties worthy of upholding his repu- tation. Very curious and distinct is the green incurved Japanese Mme. Ed. Roger, which has florets of medium width, good foliage, and dwarf habit. Werther, a large purple Japanese, big and solid, already shown in good form at the October show of the National Chrysanthemum Society, is worthy of note. Baronne Ad. Rothschild, a large, white, spreading flower, is quite as good as last year, and N.C.S. Jubilee, a capital globular in- curving Japanese—colour pale silvery lavender, reverse silvery pink—is even better at Swanley than it was either at the Ghent or Paris shows last autumn when first exhibited by M. Calvat. M. B. Verlot, a Japanese incurved with narrow grooved florets, colour rosy mauve, with silvery pink reverse; Capt. L. Chauré, of the same type, but deep golden yellow, shaded bronze outside; M. G. Chabanne, a pretty golden bronze Japanese incurved with curly tips; and Souvenir de Me- lines, bright brick-red, reverse gold, are all among recent novelties sent out by M. Calvat. So, too, are M. Massange de Louvrex, a fine canary- yellow Japanese; Mme. R. Grenier, very pure white; Secrétaire Fierens, golden yellow and crimson-bronze; Directeur Liebert, a long- petalled Japanese, colour purple-rose; Princesse de Galles, a big bloom, colour pale pink, tinted purple; Mme. Lawrence Z de, pale purple; Soleil d'Octobre, a fine new yellow; Topaze Orientale, yellow; Mlle. Lucie Faure, white; Isérette, golden bronze; Souvenir de Mme. F. Rosette, velvety purple; M. Ed. André; Mme. Ferlat, pure white, slightly tinted; Congrès de Bourges, purple-amaranth, and Mme. X. Rey Jouvin are all novelties of either this year or last of M. Calvat's raising; while most of those already well known, such as Mme. Carnot, Australian Gold, Mme. Gustave Henry, Ma Perfection, Le Moncherotte, &c., show what a large contributor to our present-day exhibition flowers this raiser has become. It is worthy of

note that several of M. Calvat's newest flowers show signs of hirsute origin. Whether this peculiarity is accidental or designed we do not know, but the chief characteristic of these is the same as in his others, the large size and massive build of the flowers being always the leading feature.

Among the Japanese kinds from various sources, Mrs. C. Probin, pale silvery pink, incurving in form and having pointed florets, is distinctly promising, and Lady Hanham, a fine sport from Vivian Morel, creamy rose and salmon, will soon find a place on the show boards. Robert Powell, a big, solid Japanese incurved, golden reverse and inside reddish bronze, was also in good form. Some well-known whites, such as Lady Byron, Mutual Friend, C. B. Hayward, Western King, Mrs. C. Bick, Kentish White, of which there was a very effective group, Mrs. H. Weeks, and Emily Silsbury, all found worthy representa- tives. Yellows of known merit were well and substantially shown in examples of Edith Tabor, Modesto, Buff Globe, a distinct sport from Good Gracious; Lady Oporto Tait, Swanley Yellow, &c. Here and there throughout the collection it was interesting to observe several first-class ad- ditions from Great Britain over the sea. Australie, Oceana, and Pride of Madford are well known, but to these varieties of colonial origin must now be added H. Cheeseman, a Japanese of reddish carmine on a deep golden ground, with narrow florets; Miss Mary Underbay, a Japanese in- curved with deeply grooved florets of a very pretty shade of pale golden yellow; Mrs. Ernest Carter, a large Japanese with medium-sized florets, colour pale yellow, reverse silvery; and a fine sport from Pride of Madford called Mabel Kerslake, which is similar in build to its parent, but of a deep rich velvety bright red-crimson, the reverse golden yellow.

In the incurved section no novelties of extra- ordinary merit were noticeable, but standard varieties such as Mrs. R. C. Kingston, Violet Tomlin, Lord Wolsley, Lucy Kendal, Baron Hirsch, Golden Empress, Prince Alfred, Princess of Wales, Mrs. Heale, Globe d'Or, and many more show that this old type is not neglected. The Anemone section is also represented at Swanley, but not to a large extent, and in the hairy type we noticed Hairy Wonder, still one of the best; Mrs. C. B. Freeman, a dull purple and gold sport from Louis Boehmer; Belle des Gordes, a very delicate pale pink, and large in size; White Swan, a fine addition, with long tubular florets; Leocadie Gentils, the new pale yellow French variety, and a few others.

Standard of quality in Chrysanthemums.

—In the report of the council of the Royal Horticultural Society for the year 1896 a wish was expressed that the various committees would be somewhat less generous in the recommendation of awards during the ensuing year. In past years Chrysanthemums with very little claim to distinction have been given awards of merit, but a change for the better appears to have set in, and only those sorts possessing high quality have so far this season been recognised. For some years the floral committees of the Royal Horticultural Society and the National Chrysanthemum Society have certificated blooms possessing size only. It seems to be an easy task to raise seedlings of Japanese sorts with coarse and irregular form and pale washy colours. However, there is evidence that ideas are changing, and no better proof of this can be obtained than that of an inspection of the rejected varieties at the floral committees of the two bodies previously alluded to. The public taste will not be satisfied with coarse and dowdy flowers, and interest must necessarily be lessened if no regard be paid to colour and form. Flowers of medium size, but of bright and clear colour, together with neat and pretty form, have over and over again been passed because they have not come up to the standard as regards size. Let flowers of medium size and proper form, together with bright and lasting colours, be the

basis of a standard of quality. The dowdy and washy colours often seen in exhibition blooms would not be tolerated in flowers grown for decoration, and more attention should be paid to raising sorts of the character advocated, as by their use a better display might easily be made.—GROWER.

#### SHORT NOTES.—CHRYSANTHEMUMS.

**Chrysanthemum Werther.**—The colour of this may be described as deep purple-red. Growers on the look-out for novelty in colour would find this variety worth growing, as the blooms are of good size with fairly long florets of medium width, slightly incurving at the tips, and showing the silvery reverse.—D.

**Chrysanthemum Geo. Gover.**—A flower somewhat after the style of Reine d'Angleterre, with long, broad, and pointed petals slightly curling and showing the reverse. The colour is mauve-pink, with a silvery reverse. The floral committees of the National Chrysanthemum Society wished to see the variety again when placed before them at a recent meeting.—H.

**Chrysanthemum Rayonnante.**—This is one of the newest of the continental sorts, and is after the Lillian Bird type, but superior to that variety. Many growers have little regard for flowers with tubular florets, but although this variety possesses this character they are sufficiently long and possess plenty of substance. The colour is a lovely shade of flesh-pink; the habit dwarf.—C.

**Chrysanthemum Pride of the Market.**—As a market variety, this should be in demand. The colour is a deep golden-yellow, freely suffused with crimson. The plant attains a height of from 5 feet to 5½ feet, and as it develops its flowers quite freely, and these are also of a goodly size for cutting, it should be very serviceable. There is another variety of the same name, but different in colour.—C. A. H.

**Chrysanthemum Nellie Brown.**—This is a sport from the well-known variety Ryecroft Glory, and has been exhibited before the floral committees of the Royal Horticultural Society and National Chrysanthemum Society quite recently. It is best described as crimson-bronze, and makes a pretty and bright display when freely flowered. The flowers of the parent variety on late buds often assume a crimson colour, this being more noticeable in the case of plants grown in the country.—C.

**Chrysanthemum Ella Curtis.**—Growers familiar with the character of the flowers of Boule d'Or and the difficulty experienced in getting really good blooms of it suitable for exhibition, should appreciate the variety under notice. This is a very large Japanese flower with long and broad florets, gracefully curling and twisting. As recently exhibited it compares favourably with the old sort alluded to, and if only a little more substance can be had with the bloom it should become a standard sort for exhibition. Evidently it is a much easier sort to grow.—D.

**Chrysanthemum Lady Hanham.**—This is the second sport that Vivian Morel has given us, and judging from blooms which have been exhibited it promises to exceed in beauty both Chas. Davis and the parent variety. The catalogues describe the colour as golden rosy cerise, but a more accurate description would perhaps be a pleasing shade of rosy-fawn. Flowers from early buds have yellowish centres with an edging of rose, but the later buds are now developing blossoms of a very lovely colour. A fine batch of this variety, with flowers of a most desirable shade of colour, is now fast opening at Ryecroft Nursery. The plants were propagated quite late in the season.

**Apera arundinacea.**—This graceful and beautiful plant, when brought before the floral committee of the Royal Horticultural Society recently by the Messrs. Veitch, was granted a first-class certificate, which, judging by the admiration the example called forth, was well merited. This singularly beautiful plant should be of considerable use in the higher portions of the rock garden, particularly in raised positions, so that its gracefully pendent plumes may be seen to advantage. The rush-like habit of the plant is quite erect and about 2 feet high, but the plumes issue therefrom, and, arching over, descend, when opportunity permits, to 4 feet in length. Given an elevated position, this elegant New Zealand Grass would produce unique results.

## ROSE GARDEN.

### WHITE TEA ROSES.

AMONG white Roses, the old and well-tried Niphetos must take front rank. Its name was very aptly selected by Bongère more than fifty years ago, and up to the present time this variety has had no equal. For outdoor culture, especially as standards, I prefer the climbing form, as it yields much larger blossoms than the dwarf form, but under glass the latter will grow and flower most profusely if a nice warm sunny spot be selected for it. In The Bride the form and texture of the flower are superb, a fact that has enabled it to secure almost the highest number of medals of the National Rose Society of any Tea Rose in existence. But the colour is not pure, and florists prefer Niphetos for this reason. If we could obtain a Rose as pure white as Niphetos



Rose Purity. From a photograph sent by Messrs. Geo. Cooling and Sons, Bath.

and as exquisite in form as The Bride, we should have a real gem. Hopes were raised that we had secured this in the White Maréchal Niel, but I think we shall find this Rose to be of very little value. Under certain conditions the old form of Maréchal Niel may be obtained of this sickly yellow shade. Souvenir de S. A. Prince is a very fine Rose, and perhaps the best white Tea for outdoors. Some do not care for the globular form, but it is nevertheless a very serviceable variety. The Hon. Edith Gifford is also a splendid Rose, useful alike at all seasons. It is creamy white with a flesh-coloured shading. This variety appears to have partly eclipsed the old Devoniensis, but it certainly has not its sweet perfume. The dwarf form of Devoniensis is a very poor grower, otherwise it is still one of the best whites. Where space is no object, I would recommend the climbing

form. If planted under glass and treated similar to Maréchal Niel, by cutting back hard after flowering, some grand shoots will be produced, and, provided they are well ripened, a plentiful crop of flowers may be secured the following spring. Mme. Bravy is one of the best former Teas, and although old, it is still worth retaining in our collections. Etendard de Jeanne d'Arc must not be despised. It is a very firm flower and very hardy. In Sombreuil we have a splendid late flowering kind of semi-climbing habit. Of Hybrid Teas, mention should be made of Kaiserin Augusta Victoria. Why it is classed with these Hybrid Teas I cannot imagine. It is a magnificent Rose of a creamy white colour, and produced abundantly on good stiff stems. White Lady is probably one of the finest large-flowered Hybrid Teas. Its immense flowers are really magnificent, and it is a better grower than Lady Mary Fitzwilliam. The Noisette Lamarque is a beautiful Rose, but rather tender.

The fine new hybrid Rose Purity (here illustrated), raised by Messrs. Geo. Cooling and Sons, Bath, has pure white flowers with a faintly flushed centre, the petals stiff and of great substance. When shown at the National Rose Society's show at Portsmouth on July 1 of the present year it was much admired. E.

**Rose Baronne de Maynard.**—With such a fine Rose as Boule de Neige in the collection one would imagine that another white variety was unnecessary; but the above Rose, not being so vigorous in growth as Boule de Neige, appears more suitable for decoration. Its flowers, freely produced, are very pure in colour and wanting in the rosy margined and often imperfect blossoms of Boule de Neige. It is true the flowers of the Rose under notice are not so perfect in form as those of the old favourite, but perhaps they are none the less valuable if the petals are irregular and sometimes pettled and crumpled. In some seasons I have found Baronne de Maynard most serviceable for cutting than Boule de Neige.—P.

**Roses with extra vigorous growth.**—There is a widespread impression among amateur gardeners that the so-called climbing Roses can only be properly cultivated upon walls or fences or supports of some kind. This is a mistake, and I would recommend anyone this season to try a few of the climbing Teas and Noisettes as bushes. Let them be planted in a sheltered spot affording plenty of room, say 4 feet to 5 feet apart each way. If severe weather threatens, tie the long shoots to a stake and protect with bracken or hair bands; then when all danger from frost is past allow these shoots to spread out in their own way. If the growths are well ripened we may expect a quantity of blossom to appear almost their entire length. When they have borne their crop of flowers some of these shoots may be removed so as to encourage the younger growths which are so freely produced by this method of cultivation and thus lay the foundation for next year's supply.—E.

#### SHORT NOTES—ROSES.

**Rose Albertine Borquet.**—This is a very perfect shaped Rose that reminds one of the favourite M. Furtado, but the flowers are large

The colour is a beautiful pale primrose, and the petals, particularly arranged in an exquisite circular form, are prettily reflexed at the edges.—P.

**Autumn pruning of Roses.**—This is often neglected, perhaps owing to its importance being under-estimated. Good Roses can only be produced from well-ripened wood, and by removing at this season soft late growths, together with thin and weakly ones, the remaining shoots will be considerably benefited by the freer admission of sunlight and air. Four or five well-ripened shoots upon each plant will yield the best blossoms, and more of them, than can ever be obtained from several weakly unripened ones.

**Roses seeding.**—This year many of the Hybrid Teas, such as Belle Siebrecht, Marquise Litta, Mc. Abel Chat-nay, La Fraicheur, Caroline Testet, Josephine Marot, Lady Mary Fitzwilliam, White Lily, Souvenir de Wootton, Germaine Traehen, and others are seeding very freely. I would advise amateurs who have nice snug little gardens to encourage the cross-fertilising of these varieties and to sow the seed in a cold frame as soon as it is ripe. They may reasonably expect in a year or two some good varieties, [excepting, perhaps, many existing kinds.—Ed.]

## KITCHEN GARDEN.

### ASPARAGUS BEDS IN WINTER.

I THINK the old, but still common plan of making Asparagus beds in winter will be less observed as time goes on, as it is about the worst system possible, and the loss of many plants and want of vigour in others in a great measure may be attributed to the winter manuring. I have seen it advised for light gravelly soils, but even on such I think it does more harm than good, and certainly is a waste of material. I am aware in some gardens there is a deficiency of labour to apply food during the growth of the plant, viz., from May to the end of August or even early September, as then the plant is building up the growth for next year's supply. Summer feeding does not take long if the weather is favourable. In rainy weather a surface dressing of fish manure, or, failing this, guano, soot, or other fertilisers is quickly applied. For summer feeding I have found no food equal to liquid manure from stables, and if a system of irrigation can be carried out, the plants delight in such treatment. Do not advise salt as food, and certainly there is no worse time to apply it than at this season. Salt given say in October, when the tops are cleared, has killed many roots at weakened others; in fact, it has done greater injury than hard cutting or years of neglect. Salt applied to light soils at the time mentioned above may be beneficial with other foods, but given now in large quantities (at any season) it destroys instead of feeds the plants. Much better results may be obtained by feeding in spring with nitrate of soda in the form of a top-dressing; not one heavy dressing, but, say, two or three during growth. I fail to see the utility of making Asparagus beds 3 feet deep, giving huge quantities of manure when forming the beds, and heaping on large quantities in the autumn. Plants treated thus cannot absorb the food given. I have often examined roots from such beds, and found most of the lower ones decayed or dying. A few new surface roots are made annually, to be killed later on by large quantities of manure, keeping the soil in a wet state, and certainly not assisting the formation of new roots. The best Asparagus I ever had was grown in soil, given an ordinary dressing of manure and double dug; sowing the seed in lines 3 feet apart, and thinning the seedlings to half that distance in the autumn. This mode of culture was adopted to all of forcing, but the plants grew so strongly that they were retained for permanent use. I fail

to see why young plants should have such large quantities of manure. Far better feed from the surface than sicken the plants before they are sufficiently strong to absorb the food.

Another great mistake in winter dressing is that it prevents the weather acting on the soil. The manure sours the soil and in many cases prevents surface roots spreading freely. Asparagus is not tender; the roots are never killed by frost if they have a covering of soil, no matter how severe the weather. If covered with manure, growth is later and not so vigorous. The beds may be made neat on the surface and tidy at the edges. By the latter I do not mean cutting down with the spade a portion of the tender roots. I am not in favour of the cutting-down process at all. I find much better results are obtained by merely having the beds defined by a slight depression. In light soils avoid deep alleys, as these cause the beds to be drained, and the side roots suffer. Beds made on the flat, or, what is better, rows of plants with a wider space at certain distances for wheeling or working between, are the best. A lot of expense is often incurred in making beds. Many think their land not suitable for the plant, but there is no difficulty in making it so. A few cartloads of fine mortar rubble, burnt garden refuse, road scrapings, or any material which makes a heavy soil porous, and for light soils a few loads of heavier material will grow good plants. Asparagus will do in most places if given sufficient depth of soil not drained to excess. G. WYTHES.

**Cauliflower Autumn Giant.**—This fine Cauliflower is often found fault with on the score of coarseness, but this in nine cases out of ten is the fault of the grower. Plants are raised early, pricked out and planted in rich, loose soil, where they grow very quickly and form large, unshapely heads. I have been cutting it during the past fortnight from a piece of ground cleared of early Peas, but not dug or manured, and the quality is excellent, nice, firm white curds, about 6 inches across, well protected by ample foliage from rain or light frosts.—R.

**Pea Autocrat.**—Too much praise can hardly be given this fine Pea. It has done splendidly with me this season, and looking round the kitchen garden at Ickworth, Bury St. Edmunds, to-day (October 25) I found that it is still being gathered almost daily, though the frost has destroyed Runner Beans and the haulm of nearly every other Pea is quite dried off. Nor is it only a late variety that Autocrat may be recommended; the quality is good enough to pass muster in July, while its deep colour and the handsome appearance of the pods make it a fine kind for late summer use.—R.

**Sutton's Drumhead Kale.**—I find this Kale of great service just at this season, and although the early winter greens have not, owing to the open weather, been so much run on as usual, the close heads are much appreciated in the kitchen. It has a very distinct appearance, the leaf-stalks broad and succulent and of a mild and agreeable flavour when cooked. After the heads are cut a plentiful supply of young shoots may be relied on all through the winter, these being much preferred here to either the Asparagus Kales or the curled varieties. If sown in March, and put out early at a good distance apart on firm ground, it is sure to be satisfactory.—S.

**A new Parsnip.**—This year I have grown Tender and True Parsnip for the first time. It is well worth growing by those who study quality. Tender and True is quite different from The Student, and may not be so much liked by those who regard size, as the new variety is much smaller than the older kind. What I so much value is the fine quality of the new kind. The roots are perfect in shape, with a clear white skin, free of irregularities, and being smaller

are very solid, and should keep well. The Parsnip has fewer varieties than most vegetables, and there was ample room for the new introduction. Many do not like coarse vegetables, and in Tender and True they will find a valuable addition to the list of useful vegetables.—G. WYTHES.

**Tomato Eclipse.**—This is a grand cropper, and what pleased me was the uniformity of the crop, there being an absence of very large, coarse fruits and very few small ones. Having noticed this variety in 1894 when grown at Chiswick and then given three marks, I determined to give it a trial when in commerce. It has done grandly, and in the open it produced excellent crops of highly-coloured fruits. I have no knowledge of its parentage, but I should think Conference was one of the parents, owing to its free-cropping and handsome medium-sized fruits; doubtless it will become a market favourite on this account. I notice there is no cracking at the stalk with fruit grown in cool houses. I have not forced this variety, but should say it would answer well grown thus.—G. W.

### KEEPING PARSNIPS.

Most growers are aware that the quality of Parsnips lifted and stored in dry sheds cannot be compared with that of those left in the soil and dug as needed. The roots stored grow out badly, shrivel, and lose flavour. Another point often lost sight of in sowing for winter supplies is that coarse vegetables keep badly; in fact, they are not worth keeping. Many, I am aware, make it a rule to sow Parsnips as early in the spring as possible; in fact, February is advised, and for exhibition roots a yard long it may be advisable, but these are not the best keepers. I usually make two sowings, my last being made early in May. These roots are left in the soil till the following spring and lifted as required. The roots are not large, but they are large enough for any purpose if quality is considered, and the flavour of roots grown in a short time is so marked that anyone who likes the Parsnip as a winter vegetable will get superior quality by this mode of culture. It is surprising what excellent roots may be grown in the shorter period named. This year I had a difficulty at the later date owing to the drought. The roots made but slow progress till August was well advanced, but now they are excellent and quite up to the usual standard. Doubtless owing to their quick growth they will be of first-rate quality. As regards keeping, many object to leaving the roots in the soil on account of the difficulty of lifting in frosty weather. A few roots may be lifted and laid in; these covered with litter are always ready for use; indeed, I have seen large breadths lifted, laid in in a north border thickly, and the land turned up roughly if needed for early crops. Plants left in their growing quarters till March can be kept sound much later if lifted then, placed under a north wall, and well covered to prevent shrivelling. The lifting at the time named causes a check and assists keeping. In severe winters Parsnips are welcomed, as there is often a scarcity of other vegetables, and frost does not affect the flavour. For late spring supplies I advise the smaller kinds. The Student and Tender and True are specially good. These are medium growers. S. H.

**Globe Artichokes in winter.**—Many can grow good Artichokes during the summer, but, owing to soil and locality, cannot with safety winter their plants. If they have a good variety it is well to take care of it, as in purchasing new stock it is not always possible to get it good. Now is a good time to pot up a few suckers for next spring, detaching the suckers from the parent plant with a small portion of root, potting up into 6-inch pots and using somewhat coarse, gritty soil. These will make nice plants for next spring, and should the old plants winter well the above work is not lost, as the young plants give later supplies and a new plantation occasionally is

advantageous. I lost all my stock a few years ago, and was unable to get home-grown plants. Many were introduced from the Continent, with the result in my case they produced prickly heads of inferior quality and were valueless. I am aware stock is easily obtained from seed, but I fear there is not sufficient care in saving seed, as many seedlings prove worthless. I find suckers treated as advised winter well in cold frames if the pots are plunged in ashes or at the foot of a south wall, and covered in severe weather with Bracken or light litter.—G. W.

**Forcing Seakale.**—In many gardens this useful vegetable has to be grown for forcing, and the first lot forces none too readily unless well-ripened crowns are selected. Frost is of great assistance in shedding the leafage, but it often happens we do not get sufficient frost in time to assist early maturing, and other measures have to be adopted. For very early supplies it is a good plan at the end of October to take up sufficient of the best crowns, those most exposed to the light and sun being preferred. The lifting causes the roots to cast any green foliage, and the check given prepares the roots for forcing. It is surprising how much more easily plants treated thus force over those lifted and placed direct into heat. For supplies, say, two months hence this may not be necessary, but at the time named I have seen strong unripened roots given much heat at the start make a very poor growth. By lifting as advised there is no waste, as the strong roots may be cut into lengths for future planting. If these are plunged in soil they will make the best material for early planting next spring.—G. W. S.

—Leafage on Seakale is now rapidly ripening, and where tidiness specially prevails may be cleared off and placed where it will decay. The roots being ready for lifting, it is practicable to get the whole, even if running into thousands, carefully lifted, well preserving the side roots in doing so; indeed, the best method is to open a good trench at one end of the breadth, and thus trench it out thoroughly. The advantage of that method is that not only are the roots so much more completely removed, but the ground is left well broken for a succeeding crop. When the stems have been trimmed of their side roots they may be laid in thickly in soil, where, should hard weather come, some litter will exclude frost, and they may be got up as needed at any time. The root-cuttings, when made, may be either planted in fresh ground at once, or be laid in thickly also.—A. D.

## BOOKS.

### MANUAL OF PRACTICAL ROOM-GARDENING.\*

This most excellent German work has been published only quite recently. The author, Herr Max Hesdörffer, who is also the editor of several German horticultural journals, has spared no trouble or expense to compile a most useful guide and reference book for amateurs. Though many professional gardeners might profit by a perusal of its pages, the book is not intended (as the author explains) for the professional, but rather for the amateur who is compelled to grow the flowers he loves in rooms, on flower-stands, in window-boxes, or on a balcony, and who may have no previous knowledge of gardening. This kind of gardening the author describes most minutely and in full detail in a book of some 500 pages, illustrated by sixteen large plates and 328 original engravings of excellent quality.

The first 117 pages deal in a general way with the various contrivances and tools required for

cultivating plants, the best arrangement of a room garden, and the various modes of propagation, watering, heating, giving air, and general treatment of room plants. This part of the book also contains directions for getting rid of the various enemies to plant life, the treatment of such plants as can be turned out into the garden during summer, the storing of plants in sheds or cellars during winter, and some most artistic arrangements for balconies, flower-stands, window boxes, glass cases, tables for flowers, various forms of hanging baskets, &c. The various stands, &c., illustrated are artistic in design, and above all intensely practical. The methods of potting, pruning, grafting (as in the case of Cactus), &c., are so clearly illustrated by good engravings, that the merest novice could not fail to grasp the meaning at a glance. Directions are also given for restoring to health plants that look sickly from some cause or other.

In the second part of the book nearly 300 pages are devoted to the description and cultivation of such plants as can, in the author's opinion, be safely recommended for cultivation in rooms. The various temperatures required by the plants are given, and will be an excellent guide for the amateur. Elaborate directions are also given for the artistic grouping of plants requiring the same kind of treatment. The illustrations throughout are faithful reproductions of the plants they represent and whose treatment is discussed in detail. Considerably over 200 capital pictures of such suitable plants appear in this part alone. Very handsomely illustrated is also the part devoted to aquariums of all kinds and sizes, most of the pictures being of a very high order of artistic merit, showing the elegant forms of plants that may be grown in a large or small aquarium in rooms. The chapters dealing with the aquarium extend to nearly fifty pages, and contain not only engravings of graceful water plants, but also illustrations of very ingenious contrivances for heating the water and methods of working a small fountain from electric and other motors. Another shorter chapter is devoted to the terrarium, showing how plants may be grown in glass cases of ornamental design. The author distinguishes between the moist and the dry terrarium. The former is intended for all kinds of Ferns, fine-foliaged plants, &c., while the latter is to be the home of various Cacti and other plants of the succulent type. Hints are also given—for those who like such things—how the terrarium may be further enlivened by lizards, small frogs, and other reptiles.

The third and last part of the book is also richly illustrated, and deals with the forcing of all kinds of flowers, and especially bulbous plants and their treatment.

Altogether Herr Hesdörffer's work deserves to be fully appreciated, and if translated into English would doubtless be a great boon to those English amateurs who are not sufficiently conversant with the German language to read this valuable book in its original form.

Elmside, Exeter.

F. W. MEYER.

**Clearing off mealy bug.**—C. Edwards can at little expense very easily keep mealy bug down by cleanliness and pure methylated spirit. My viney is about 200 feet long and 16 feet high. I generally have about 1000 bunches of Grapes yearly. The house has not been painted inside since it was built—about twenty-five years since. Therein are all sorts of Vines, Loquat, Acacia, &c. I seldom syringe, perhaps once or twice yearly, but give all roots plenty of water every week. All roots are inside the house. It is warmed by

three large stoves. About April I syringe the glass outside with a mixture of new milk and whitening, and add half water. About January I lime-white, mixed with plenty of methylated spirit and soft soap, all the walls, and also wash all the glass and woodwork inside with hot water mixed with plenty of methylated spirit and soap; then I take all the surface earth away from the borders and cover all roots with bone manure and then over that spread some 3 inches of coco nut fibre refuse. I then dress the Vines as usual and just dab a small camel's hair brush full of pure methylated spirit into all the joints where any mealy bug can be seen or expected. I have a jar of methylated spirit always in the house and at any time of year if any mealy bug is seen I at once give it a dab of pure methylated spirit. AMATEUR.

## SOCIETIES AND EXHIBITIONS.

### NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the general committee of the society was held on Monday evening, October 25, at Anderton's Hotel, when Mr. T. W. Sanders occupied the chair. The reading of the minutes and correspondence occupied some considerable attention, and after these preliminaries had been disposed of, Mr. Harman-Payne called attention to a letter received from the president of the French National Chrysanthemum Society, M. Maximé de la Rocherie, offering an invitation to the members of the English society to attend the Orleans conference on November 6, expressing a wish to see some blooms there, English cultivation. No proposal, however, was made, there being apparently nobody desirous of making the journey.

It was announced that the annual dinner of the society was fixed for Wednesday, the 24th proximo at Anderton's Hotel, and that Mr. T. W. Sanders was the chairman of the general committee, who preside on that occasion. It was also announced that the society's annual outing for 1898 had been fixed, and arrangements made with the G. E. Co. to undertake entire charge of the party. The event is fixed for July 18. Stewards for the November exhibition were elected, the following gentlemen being chosen, viz., Messrs. Langd Simpson, Taylor, Willis, Ingamels and Ree. Following an old-established precedent, the committee have invited members of the floral committee to dine together on the evening of the day on which they meet, namely, December 13, in consideration of their services to the society.

The dates of the society's shows for 1898 are proposed as follows: September 6, 7 and 8, October 11, 12 and 13, November 8, 9 and 10, December 6, 7 and 8. The secretary then presented a rough financial statement concerning the cost of sale of the society's Jubilee edition of the catalogue, which was, considering everything, regarded as satisfactory; the demand is steady, and it is expected that there will be a good demand for this work during the present season. Mr. Bevan called attention to the fact that at present there was no catalogue committee in existence, and having been elected early in the year, and thought this was a matter that should be settled without delay.

Thirty-one new members were elected and following societies were admitted in affiliation: Wolverhampton Chrysanthemum Society and Romford Society.

A meeting of the floral committee of this society was held on Monday afternoon, October 25, at T. Bevan in the chair. There was a good display of novelties. First-class certificates were awarded to the following:—

CHRYSANTHEMUM LADY HANHAM. — A lovely rosy-fawn sport from Vivand Morel, and partaking of all the excellent qualities of the parent. The blooms from late buds were very pretty, and it promises to be the most interesting of

\* "Handbuch der Praktischen Zimmergärtnerei." Von Max Hesdörffer. Published by Robert Oppenheim, Berlin.

Exhibited by Messrs. H. Cannell and Swanley.

**CHRYSANTHEMUM MRS. PROBYN.**—A pale flesh-Japanese incurved flower, with paler reverse; petals of great breadth and substance, pointed, and evenly incurving to the centre. This is a form of lovely form and elegant and delicate coloring. From Mr. Norman Davis, Framfield.

**CHRYSANTHEMUM PRIDE OF THE MARKET.**—This was exhibited as a market variety, and should be valuable for that purpose. It is a form of medium size with rather broad florets. The colour is golden-yellow, freely suffused with a dash of crimson at the base. Several vases, each filled with about a dozen blossoms, made a most effective exhibit. Shown by Mr. N. Davis.

**CHRYSANTHEMUM MME. PHILIPPE RIVOIRE.**—A large pure white flower, with broad florets of splendid substance, slightly twisted and curling, making a promising bloom. Those from early buds are inclined to be coarse, later flowers being somewhat free from this only blemish. From Mr. W. J. Godfrey, Exmouth.

**CHRYSANTHEMUM ELLA CURTIS.**—An immense flower, very much resembling in form the old *Bois d'Or*, but a distinct improvement upon that variety; florets broad and strap-like and intermingling in a pretty manner; colour rich yellow, with reverse of a lighter shade. Exhibited by Mr. W. J. Godfrey.

**CHRYSANTHEMUM LADY RIDGWAY.**—An enormous flower of Japanese incurved form, with broad and massive florets; colour rosy red inside, with light bronze reverse. Shown by Mr. W. J. Godfrey.

**N.C.S. Jubilee**, a Japanese incurved, colour pale-pink with paler reverse; Gladys Roul, a chin white reflexed Japanese with narrow florets; Geo. Gover, a large mauve-pink Japanese with long broad petals, in the way of *Reine d'Arleterre*; King of Yellows, a deep rich yellow incurved flower; Werther, a reddish purple flower, with florets of medium width; Nellie Brown, a crimson and golden yellow sport from *White Glory*; Mrs. G. W. Palmer, a rosy white sport from Mrs. C. H. Payne, and distinctly better than the parent variety; G. J. Warren, a self pale yellow sports from the popular *Mme. Carnot*, and Mme. Desblanc, a Japanese flower, with long narrow florets, colour pale mauve-pink with a white reverse, were other good varieties shown.

The floral committee of this society met at the Royal Aquarium, Westminster, S.W., on November 1st. Mr. Thos. Bevan in the chair.

A great many novelties were submitted, and a large number of certificates were awarded to—

**CHRYSANTHEMUM G. J. WARREN.**—This is a pale white sport from *Mme. Carnot*, and late flowers appear in colour in the centre. The flowers partake of all the other characteristics of the parent variety. From Mr. W. Wells, Earlswood.

**CHRYSANTHEMUM MRS. G. W. PALMER.**—A rich rosy white sport from Mrs. C. H. Payne, with a white reverse to the broad florets. It is a distinct advance upon the parent variety, late flowers being very rich in colour. From Mr. W. J. Godfrey.

**CHRYSANTHEMUM LADY ISABEL.**—An immense flower with broad florets of good substance; colour pale blush, with white centre, late flowers being of a beautiful pale flesh-pink. From Mr. W. J. Godfrey.

**CHRYSANTHEMUM LENA WEE.**—A distinct flower of spreading form, with long semi-fluted florets of good substance and incurving at the tips; colour intermediately edged with pale violet-rose. From Mr. Gerbeard, gardener to Sir Henry Peek, Bart., London Common.

**CHRYSANTHEMUM MRS. F. A. BEVAN.**—An immense Japanese with long florets of medium drooping and incurving at the ends; a pleasing shade of flesh-pink, with paler reverse. Sent by Mr. W. J. Godfrey, Exmouth.

**CHRYSANTHEMUM GEORGE FOSTER.**—Massive incurved Japanese of pleasing form, with broad-

tightly incurved and twisted florets; colour rich yellow. From Mr. Godfrey.

**CHRYSANTHEMUM MRS. CHAS. BIRCH.**—Another deep, compact, incurved Japanese, with florets of medium width and tightly incurving. The florets also are hirsute; colour white, slightly edged pale rose. Mr. Godfrey.

**CHRYSANTHEMUM MARY MOLYNEUX.**—A large spreading flower, with long, broad, incurved and curled florets of good substance; colour inside deep rosy pink with a pretty reverse of silvery rose-pink. From Mr. N. Molyneux, Rookesbury Park, Fareham.

**CHRYSANTHEMUM MRS. N. MOLYNEUX.**—Massive incurved flower, of globular build, with fairly broad florets, somewhat irregularly arranged; colour creamy white. Also from Mr. N. Molyneux.

The committee commended N.C.S. Jubilee, a large flower, with florets too short for the quantity there are to develop; colour silvery mauve. From Mr. Wells. They wished to see again Mrs. P. R. Dunn, a pretty Japanese Anemone, with well-formed disc, slightly tinted yellow, and ray florets of the purest white, and Thos. Singleton, an incurved of very fair form, colour pearly white, edged rose-pink.

Other varieties deserving notice were Mrs. C. S. Bates, a bright nankeen-yellow incurved; Mrs. Coombes, long florets, curling at tips, colour pale flesh-pink, deep rose centre; Admiral Ito, a very large Japanese, colour straw-yellow, with slightly twisted and curling florets, making a bloom of much substance; and Beauty of Adelaide, large spreading flower with long fluted florets, incurving at the ends, colour pale rosy pink.

**Royal Horticultural Society.**—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 9, in the Drill Hall, James Street, Westminster, 1 to 4 p. m. At 3 o'clock a lecture on "Roots" will be given by Professor F. W. Oliver, D.Sc.

**Royal Gardeners' Orphan Fund.**—At a meeting of the committee of the Royal Gardeners' Orphan Fund on the 29th ult., the secretary announced the receipt of a bequest of £457 2s. 11d. from J. W. Thomson, late nurseryman at Haywards Heath; also the following donations, for which the special thanks of the committee were accorded: Rev. A. Lowe, Rangemore, Burton-on-Trent, proceeds of a collection at harvest festival, £6 1s. 6d.; Sandringham Estate Cottage Garden Society, £5 5s.; Wimbledon Horticultural Society (sale of flowers), £5; Uckfield Chrysanthemum Society (sale of flowers), £3 3s.; J. Selway, Betteshanger, £3; per F. Roberts, local secretary, Ramsgate, £2 1s.; Forest Hill Horticultural Society, £1 10s.; Hesse and District Horticultural Society, £1 4s. 3d.; Bradford Paxton Society, £1 2s. 6d.; C. Herrin, Maidenhead, £1; G. Carpenter, Byfleet, 10s.; J. Dunkin, Warwick, 10s.; M. Kneller, Basingstoke, 8s. It was decided to hold the annual meeting at Anderson's Hotel, Fleet Street, early in February, when the election of children to the benefits of the fund will take place. The necessary nomination forms may be had on application to the secretary.

**The weather in West Herts.**—The weather remained warm until the 2nd inst., but since then the day temperatures have fallen considerably. On October 29 and 30 the temperature in shade rose to 63°, a very high reading for so late in the month. The daily range in temperature has also been very remarkable for the end of October, the difference between the highest and lowest temperatures in the thermometer screen amounting on two days to respectively 29° and 30°. The temperature of the soil both at 1 foot and 2 feet deep remains about a degree warmer than is seasonable. No rain fell during the week, but on several mornings there was a measurable quantity of water in the rain-gauge yielded by fog. On two days the mean rate of movement of the air fell short of a mile an hour. There has been lately a splendid record of bright sunshine for the time of year, the

average duration for the last six days reaching nearly five hours a day. October proved very warm, particularly the latter half of it. Taking the month as a whole, it was the warmest October since 1893. That month is usually the wettest of the twelve, but this year less rain fell than in any October during the last forty-two years, with the exception of 1879, when the total rainfall was very nearly the same. The sun shone on an average for three and three-quarter hours a day, which is the best record for the month since 1893. During the twelve years over which my wind observations extend there has not occurred any other October so calm.—E. M., *Berkhamsted*.

NOTES OF THE WEEK.

**Erica ciliaris purpurea.**—Broad patches of this in the upper portions of the rock garden at Kew are now very showy. It is certainly a fine plant for such positions, or again for a belt to a bank of *Rhododendrons*.

**Stobæa purpurea.**—This striking plant is still giving its picturesque blossoms, and though not showy when compared with many flowering plants, possesses an individuality of its own as much in the flower-heads as in the distinct Thistle-like habit of the whole plant.

**Sidalcea malvæflora atro-purpurea.**—The late spikes of blossom of this plant are now very showy, and since so little of colour remains in the garden, the tall spikes 3 feet high are readily seen. Like the other members of this race, the above is free-flowering and suitable for rock garden or border.

**The Gentiella (Gentiana acaulis).**—This autumn in certain localities this is making quite a pleasing display. The past few days, however, in the London district with its dense fogs have not assisted the flowers, but in more favoured spots the autumn buds open in a very charming manner and are always welcome.

**Polygonum sphærostachyum.**—One very surprising characteristic of this striking plant is the great length of time the spikes of flowers retain their brilliant colouring. Even a few spikes make quite a display. This species, however, does not spread with the freedom of many kinds, so that it will not be a common plant as yet.

**Chrysanthemum Souce d'Or.**—Though one of the oldest of *Chrysanthemums*, this is still a most beautiful one, if not indeed unique, by reason of its colour. The blossoms, of medium size, are produced in large sprays on stiff stems, that render them particularly useful for vases. It grows freely, and amateurs will find this variety still of sterling worth.

**Gazania splendens.**—Possessing a hard constitution, or at least in a greater degree than most summer flowers, some large patches still in the open have been crowded with their brilliant flowers during the past few days. Particularly fine is a large group near the entrance to No. 7 house at Kew. The plants had quantities of fully expanded flowers on them a few days since.

**Rhododendron Princess Alexandra.**—Among the greenhouse species, particularly such as flower during autumn and winter, very few can equal this in point of freedom. Once it begins to flower it is pretty sure to continue for at least three or four months in succession. The blossoms are white, flushed with rose-pink, and are produced rather freely in terminal bunches.

**Primula japonica**, in several shades of colour, and *Primula capitata* are still flowering at Kew. The latter species is by no means uncommon as an early autumn flower, especially where the plants have not grown freely during the heat of the summer. Both species are welcome at any time of the year, though the Himalayan kind is not the most reliable of the species in all soils or gardens.

**Crocus cancellatus var. cilicicus.**—The type here mentioned with its beautiful variety are among the most charming of the autumn-flowering Croci. The Cilician form is now flowering in the rock garden at Kew, and very effective it is in the pretty patches of colour here and there. The blossoms are large and of a pleasing pale blue shade when fully expanded, the orange anthers very conspicuous.

**Achillea Trautmanni** is a neat and pretty species, with deeply cut and long linear leaves after

the manner of the taller *A. serrata*, which, however, attains nearly or quite 3 feet high. The above species, a native of Austria, is scarcely more than 6 inches or 8 inches high, having umbels of pure white flowers above the very dark green tuft of leaves. It is now bearing a few delicate sprays of its pure white flowers.

**A mild season.**—At the Exmouth Chrysanthemum show held last week (October 28 and 29) *Nasturtiums* formed a portion of the flowers used in the table decorations, whilst single and Cactus Dahlias and Sweet Peas were exhibited by Mr. W. J. Godfrey. French Beans and green Peas, as well as cut-door Tomatoes, were exhibited in collections of vegetables grown by cottagers.

**Polygonum affine.**—Though the actual flowering of this attractive species is past, there is still an equally good effect from the well-coloured spikes of flowers and the richly as well as variously coloured leaves. Any plant serving a two-fold purpose in such a way as this certainly merits general cultivation. Those who trim the flower-spikes from this plant the moment the blooms have lost their first beauty should in future wait to see its effect in autumn.

**November flowers.**—We send you herewith a few blooms of French Marigolds and single Cactus Dahlias to show the extreme mildness of the season at this date. These were all grown in an open and exposed situation, the Dahlias on a low and the Marigolds on a higher level. Of Marigolds we have about 15,000 in full bloom still.—DOBBIE & Co., Orpington, Kent.

\* \* Very bright and pretty.—Ed.

**Calceolaria amplexicaulis.**—After thirty years' experience of the value of *Calceolaria amplexicaulis* in a west of Ireland garden, where it flowers freely, irrespective of weather, from the time of planting out—beginning of May—until now—beginning of November—I can fully confirm all that "A. D." (p. 316) says. The bed is still a lovely mass of primrose colour, as in early summer. No golden *Calceolaria* can at all rival it in growth and beauty.—E. F. G.

**Polygonum vaccinifolium.**—Now that November has come, garden flowers become scarce. I do not think *Polygonum vaccinifolium* is grown enough. The pale pink flowers are very pretty in a large bed, which the plant being so free a grower soon covers. A group in our rootwork here, of about 4 feet across, trailing down to some large early Hellebores in flower, with a background of large Holly Ferns as green, has a very good effect.—GEORGE F. WILSON.

**Aster diplostaphioides.**—Though one of the very largest so far as the flower-heads are concerned, this very desirable species does not appear to be generally cultivated. In the manner it springs from the soil the plant more resembles some of the varieties of *Erigeron speciosus*, yet not producing the free tuft of leaves. It is a native of the Himalayas and attains 2½ feet high, the blossoms usually solitary, each fully 3 inches across, the ray florets of a purplish-blue shade, the disc purple.

**Chrysanthemum Miss Rose.**—Though little more than 15 inches high from the pot, this is among the showiest of all its race. The blossoms, each not more than 2 inches across, are of a lilac hue and produced in great numbers, the little bushes being completely hidden by the flowers. The shade of colour is pleasing, and rendered more attractive by the lighter centre that prevails in so large a number of the blooms. A large number of plants is now in bloom in the greenhouse at Kew.

**Rose Marie van Houtte.**—This lovely variety is flowering abundantly this autumn, and this in spite of the October frosts that were severe in some localities. Owing to a fine dry time since as much as during the attack of frost, a large array of beautiful flowers has resulted. Good sorts such as this are most valuable for carrying on the season and cannot be too well known. The combined pale yellow and rosy-blush tint at this season is charming.

**Leucojum (Acis) autumnale.**—All who have grown this chaste little autumn flower will agree with what Mr. Arnott has said concerning it recently in THE GARDEN. At times the hardy bulb specialist grows this pretty plant in pots. With several bulbs together and established in this way it is quite easy to transplant bodily. Let it be so planted in good soil that it may remain three or four years, and in the meantime, by saving the seeds that are usually produced each

year, a nice stock will result. It is a charming little plant and one scarcely known.

**Gesnera amabilis.**—The value of this beautiful autumn and winter-flowering species was amply illustrated at the Drill Hall quite recently by some well-flowered examples from Trentham. Though grown in moderately-sized pots, the plants were freely flowered, the blossoms borne in a large pyramidal panicle of a cream-yellow shade, the throat of the drooping flowers almost golden. Quite as attractive in this as in many others of the genus is the beautiful and handsome foliage, in this instance of a dark bronzy hue. Such well-grown plants are valuable at this season and are worth every attention.

**Tricyrtis pilosa.**—An appropriately named species with large ovate acuminate leaves, decidedly downy on both surfaces. Not only is this species distinct in its rather woolly leaves, but equally so in the prettily-marked blossoms, the latter white and freely covered with blue-mauve spots, a yellow blotch appearing at the base of the segments. The species is, perhaps, the most elegant of this small genus and one of the most freely flowered, the blossoms appearing freely in terminal heads and likewise in the upper axils of the leaves. It comes from the Himalayas and is now flowering in the Royal Gardens, Kew.

**Saxifraga Fortunei.**—Though fairly hardy in certain aspects, this valuable species is not sufficiently so in all positions and soils to make it a reliable plant. Very frequently the roots will manage to survive a spell of cold weather, but as a rule the plants are so weakened thereby that their flowering is uncertain. It is better to face the facts and not expose all the stock of a valuable and by no means common species in the open garden. At Kew the plant is grown largely in pots for the embellishment of the greenhouse, for which it is well suited. It is now in flower, the large panicles of white blossoms being very attractive.

**Good Peas in November.**—I send you a box of Sutton's Late Queen Pea to show its excellent quality as a late autumn Pea. I have at the present time (November 2) a good crop, and the haulm is still in full bloom, which you will see by the enclosed. I shall continue gathering if the weather is favourable for another month.—A. G. HOOKINGS, *The Gardens, Olddown House, Almondsbury, Glos.*

\* \* Excellent Peas for any season, and very welcome in November. Why we should not sow more late Peas is a question should be asked in every garden, as the best of the Pea season may in some years be the autumn. Several sowings should be made in July.—Ed.

**Aster grandiflorus.**—Only very rarely is it that one sees this lovely perennial Aster in good condition in the open garden. In certain warm seasons a few blooms expand, sufficient indeed to make one crave for more of such beautiful late flowers. It may be—and indeed is—grown in pots in the greenhouse, as at Kew and elsewhere, but under glass the flowers quickly lose the fine depth and richness of colouring that are seen when naturally grown. The plant has a singularly neat, elegant habit, and when well flowered is one of the finest of the late hardy plants to bloom. Deep and good soil is needed for full development, though more important still is a warm position that will forward the growth in summer.

**Cosmos from Ireland.**—We have had no frost yet to cut down Dahlias; hence the varieties of *Cosmos* are very beautiful. Supposing the *Cosmos* never flowered, the foliage is very beautiful. For table decoration, blended with the leaves of *Prunus Pissardi*, *Liquidambar*, *Parrotia persica*, &c., the effect is very unique. The single Cactus Dahlias are equally useful in small glasses. I also send a few blooms of Mary Anderson Chrysanthemum from two-year-old plants grown naturally.—W. BAYLOR HAETLAND, *Ardeairn, Cork.*

\* \* Very pretty, graceful plants. Some buds we cut and put into water a week ago have

opened, and now are as fresh as on the plan—Ed.

**Flowers in the Isle of Man.**—I send you with two boxes of flowers cut this day from the open. The list includes *Gladioli*, *Dalys*, *Kniphofias* (space permits small spikes only, *Leichtlin's Triumph* is included), *Fuchsias*, *Cerise*, *Veronicas*, *Lilies*, *Begonias*, *Sweet Peas*, *Spiraea Anthony Waterer*, *Etealea palmata*, *Mignonette*, *Nasturtium*, *Hydrangea*, *Ceanothus* and *Chrysanthemums*.—R. OKELL.

— I herewith send you a box of flowers cut at random from the open on November 1. We have a good display all round yet, which is some at exceptional. The gathering includes *Sweet Peas*, *Chrysanthemums*, *Nasturtiums*, *Dahlias*, *Roses*, *Salpiglossis*, *Pentstemons*, *Corndrops*, *Caffre Lily*, *Anemones*, *Begonias*, *Leopard's-bane*, &c.—JAMES INGLIS, *The Gardens, The Nursery, Isle of Man.*

\* \* Numerous and beautiful flowers in the state for November.—Ed.

**The Jasmine Nightshade (Solanum jasminoides).**—I am glad to hear this plant so highly spoken of. It may not be generally known, but it does well and flowers freely in a north house. One is often asked to recommend a plant suit for the roof or back wall of a north house fernery. *Solanum jasminoides* will be found useful for this purpose. Some time ago I tried a house facing north into a cool fernery, planting this *Solanum* against the back wall. Here it most luxuriantly. It very soon covered the roof and I trained it down the rafters, and now the entire roof is covered with it, and at the present time (November 1) it is carrying a large number of pure white blossoms, which are useful for bouquets or for house decoration. It does well in a mixture of leaf-mould and loam, likes plenty of water in the growing season, if kept rather dry in the winter will stand several degrees of frost with impunity.—T. B. F. *Ashwellthorpe Hall, Norfolk.*

**Outdoor Chrysanthemums.**—There is a remnant left who will not fall down and woe the giant *Chrysanthemum*—charming as a mop upon its handle or as a Cauliflower on its stalk. To these belated lovers of Nature as opposed to the monstrosities of the growers the outdoor *Chrysanthemum* appeals, and we have in wonderful late autumn had an unusual character admiring it. The outdoor trials at Chiswick must be hailed with delight by all lovers of door flowers, for the bedding rage of twenty to thirty-five years ago drove the outdoor *Chrysanthemum* practically out of cultivation. It was when there was an outdoor show of it in the Temple Gardens, and bright and gay the pot plants and the reflexed shone among their smoky roundings. Happily, a taste for more natural things is again among us, and the Chiswick trials are a sign of it. One thing is wanted—a race of single outdoor *Chrysanthemum* to flower, in fairly good years, between September 15 and November 9. They would be our usual deluges of rain, interspersed with fogs and frosts, much better than the deluges of flowers. The colours, too, would form a delightful contrast to the blues, whites and purples of the Starworts, while single flowers would mix better with the latter than double ones. If florists, as seems probable, are raising many outdoor *Chrysanthemums*, let them refrain from throwing away early singles. They will assume their reward if they keep them.—J. I.

**Names of plants.**—*Geo. Smith.*—1, *Isoetes macrospora*; 2, *Pteris longifolia*; 3, *Selaginella selaginoides* probably *caesia* if of a peacock blue colour, but cannot say for certain from such poor specimen; 4, *Alisma plantago-foliosa*; 5, *Lastrea dilatata*; 6, in the absence of fruitification cannot identify. Send better specimen or portion of frond with spores or fruits on. *J. H. W. Thomas.*—The common Bryony.—A. 1, *Picea Nordmanniana*; 2, *Abies Menziesii*; 3, *Rubus androgynus*; 4, *Lycocystis formosa*. We cannot undertake to name four specimens in one week.

# THE GARDEN.

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## ORCHIDS.

### PHALÆNOPSIS LOWI.

Orchids have a worse character as garden plants than this, and I was rather pleasantly surprised to come across several fine plants of it in bloom recently. Doubtless this species is almost strictly deciduous in a state of nature, and although I have always had an idea that the plants were best kept slightly on the move, the specimens in question had been differently treated. No water was allowed after the last of the blossoms were past, which was usually in the early part of December, but the plants were kept in a warm, moist house during the winter. Most of the plants lose the whole of the foliage, one or two would retain, perhaps, a single leaf. All were treated alike, however, and as soon as the first signs of activity appeared in February, the temperature was increased and the plants were given a thorough soaking of water. No more was given until the plants were getting on the dry side again, but as the season advanced and root action with it, the moisture was more freely applied. The majority of the plants put on about five leaves during the summer months, and all of them flowered at various times in October and September. This is the routine that has led in this country to success, but one or two points may be considered before one allows that this treatment is correct, or should be followed. The plants have not, I believe, been very long under cultivation; consequently they still retain a good deal of the latent vigour of their native habitat. This would enable them to stand with impunity a check that plants long acclimated could not. The house, too, where they were grown doubtless suited them well; it obtained many choice *Cypripediums* and a collection of Australian and New Guinea *Dendrobiums*, and was, therefore, kept much warmer than the usual *Phalænopsis* house. This would of course prevent the compost from

drying so rapidly or thoroughly as would be the case under different circumstances, and all these points need consideration. Certainly the plants, after a decided resting period, come away very vigorously. The same thing is seen in many other genera and species, and wherever the rest is thorough, and spread over a season of at least two months, I am quite sure the plants are more likely to bloom freely. But the rest must not be so prolonged as to weaken the plants, and if after trying it one season and finding the plants start in spring with decreased vigour, I should certainly not repeat the experiment. The rooting medium for *P. Lowi* should be carefully arranged. I used to grow it on wood blocks without a particle of Moss, these being sunk into pots filled with water. Enough moisture found its way up the blocks to keep the foliage green during winter, and these plants were the most satisfactory I ever had under my care. I have lately seen it thriving in small wooden baskets, about three or four plants in each, and these when in flower were very bright and effective. But in any case the thinnest possible compost should be given and a few lumps of limestone used in place of the crocks for drainage, and also mixed with the Sphagnum Moss, will be found of benefit. While growing freely a very brisk moist heat is necessary, and although the plants like a clear light the rays of the sun must be well broken up by the use of suitable blinds. Insects are not usually troublesome, and are easily kept under by the usual means. *P. Lowi* is a very dwarf species, almost stemless, with leaves about 4 inches in length on strong plants. The spikes of flower rise in autumn to the height of 15 inches or 18 inches, and the individual blossoms are about 2 inches across. The sepals are very narrow, the petals much broader, rosy white, with a suffusion of purple at the base. The lip and column are purple, the latter much elongated, and arching over the former. It is a native of Moulmein, where it was discovered by the Rev. C. S. Parish—recently deceased—and sent by him to Messrs. Low in 1862. R.

### MASDEVALLIAS.

THERE are few species of Orchids that make a finer display or are more admired than *Masdevallias*. Yet how seldom do we meet with them well grown. They are either found huddled together at one end of a house as if of no consequence, or maybe they have become so disfigured with the black spot, that they do not present a respectable appearance. I am sorry to say the latter cause is often put forward as an excuse for failure. This is to be regretted, as with a little forethought and attention, the spot, if not totally destroyed, can be considerably diminished. My experience in this matter is, that the spot is usually caused by the combination of two things, viz., subjecting the plants to too low a temperature and keeping them too wet at the roots. I think the temperatures usually accepted for *Masdevallias* during the dull and cold winter months are far too low. The temperature I have found most suitable to their requirements is about 50°. This is for *M. Harryana*, *M. Veitchi*, and others, both species and hybrids belonging to this section. If the temperature falls much below this for any length of time, the dreaded spot usually makes its appearance. It is better to maintain a few degrees over 50° than under, as it affords opportunities of bringing the ventilators into use, thereby helping to maintain the desired condition of the atmosphere. I usually pot the plants in the month of September, as they at that time commence growing. They soon get hold of the new material and quickly become established, which it is desirable they should do before it becomes necessary to resort to the use of fire-heat. If the plants are kept in a fairly dry condition through the dull winter months, the young growths do not make their appearance to any large extent until there is a prospect of brighter weather and the return of spring. The plants, having then the benefit of good material in which they have become established, grow away freely. I have only dealt with the cool and most attractive section. There are many more interesting species, such as *M. tovarensis*, *M. Schroederiana*, *M. macrura*, *M. Ehippium*, *M. gargantua*, *M. leontoglossa*, *M. Shuttleworthi*, and the many members of the *M. Chimæna* section, that require an intermediate house temperature during the cold months of the year. These are

always attractive when in flower. I usually leave the potting of this section until the spring.

HY. J. CHAPMAN.

**Vanda Sanderiana.**—The remarkable plant of this species which was exhibited at the Royal Horticultural Society's meeting at the Drill Hall on October 13 last year, on which occasion it was awarded a gold medal, is now again flowering in Mr. Gurney Fowler's collection at South Woodford. It has at the present time nine spikes of bloom, which are in fine condition. The colour, no doubt owing to the bright season, is finer than last year. The flowers, on the whole, are larger, and the plant is in good condition.—H.

**Cattleya labiata glauca.**—This is a desirable variety, and was recently noted in flower in the collection of Mr. J. Bradshaw, The Grange, Southgate. The sepals and petals, of fine form and substance, are delicate rose, the front lobe of the lip of a distinct deep mauve shade of colour. The side lobes are pale rose, shading to yellow, lined with purple at the base. It is a recently-imported plant, and one of the most pleasing and beautiful varieties we have seen.—H. J. C.

**Mormodes pardinum.**—This lovely and interesting species is a native of Mexico, and first flowered in Mr. Bateman's collection in 1838. The flowers have a faint perfume. The ground colour of the twisted flowers is light yellow, heavily spotted with chocolate-red. They are produced on dense spikes, each upwards of 1 foot in length. A considerable number of this species and its variety unicolor was recently in flower in the nurseries of Messrs. W. L. Lewis and Co., Southgate.—C.

**Lælia purpurata var. Mrs. R. I. Measures.**—This lovely form has flowered in the Cambridge Lodge collection. The sepals are white, slightly suffused with rose, the petals white, suffused with deep rose and heavily veined from the tip to the base with the deep crimson-purple of the lip, the front lobe of the lip being deep purple, heavily veined with velvety crimson. The plant bore three spikes, with an aggregate of ten flowers. It is one of the most distinct and beautiful forms we have seen.

**Cattleya Bowringiana lilacina.**—Though not so showy as the typical form, this variety is very delicate and pretty. A nice plant of it at Camberwell is now in flower, the blossoms being of medium size, the sepals, petals, and ground colour of the lip being of a uniform lilac-rose tint, the blotch on the front of the lip replaced by a purplish suffusion and the centre creamy yellow. It is unfortunate for metropolitan growers that this fine plant flowers so late in the season, as the blossoms are among the first to show the evil effects of the fogs now so prevalent.

**Dendrobium Phalænopsis.**—This popular Orchid is flowering freely this season, and I have noticed many fine forms of it in several collections around London. Mr. W. Bull has a fine stock of it in many charming varieties, these including both the deeply tinted purple-lipped forms and the more delicate pale tinted ones, such as *D. P. bellum* and *D. P. delicatum*. All are very useful at this season when such a demand for choice cut flowers for all purposes exists. It is no use attempting to grow this plant without plenty of heat and moisture, but given these and due attention its culture is not difficult.

**Angræcum bilobum.**—A nice lot of plants of this chaste and pretty species was recently flowering in Mr. Bull's nursery where it is well cultivated. The species seldom exceeds half a foot in height, the leaves are short, deep green, and the scapes droop prettily from between these. About a dozen flowers occur on each, these being pure white on the sepals and petals, the elongated spur sometimes tinged with red. *A. bilobum* is a native of Sierra Leone and other parts of Africa and thrives well in strong heat while making its growth. Small baskets or pans are the best re-

ceptacles for it, the compost consisting of clean Sphagnum and charcoal.

**Restrepia Lansbergi.**—This plant has become rare in Orchid collections, not being a large or very showy species. It is, however, very beautiful, and, as I noted recently at Cambridge Lodge, very free flowering. It is a dwarf growing plant, the flower-stems being thrown only a little above the leaves, and the blossoms are bright orange-erimson, spotted with a deeper tint. The sepals are very delicate in texture, so much so as to appear semi-transparent. It is a native of Caracac, and delights in a mild and moist climate the whole year round. It was discovered and sent home by M. Wagener in 1850.—R.

**Cattleya labiata autumnalis var. lilacina.**—This very distinct variety has recently flowered in the Cambridge Lodge collection from a batch of imported plants. The sepals and petals are of the average size, but of a distinct pale lilac colour. The lip is the most distinguishing feature, the front lobe being of the same colour as the sepals and petals, with two distinct white blotches at the base. The rich purple of the front lobe characteristic of the type is entirely dispensed with. The side lobes are a shade darker at the top than the front lobe, becoming suffused with yellow and brown at the base.—C.

**Cypripedium Allenianum superbum.**—The best form of this rare hybrid I have ever seen was recently in bloom at Cambridge Lodge, where it was raised by Mr. Chapman. It is far before the typical *C. Allenianum*, the dorsal sepal being nearly 3 inches wide, white at the apex with the median line as in *C. Spicerianum*, and a rosy suffusion at the base. The petals are light green, the pouch deeper, and all are heavily suffused with brown. It makes a most beautiful and refined flower, one of the finest of hybrids in existence, and is the result of crossing *C. Spicerianum* and *C. Curtisi*.—R.

#### DENDROBIUM AUREUM.

The presence of this pretty species in flower is at once apparent in a house, the delicate fragrance being quite distinct from that of any other *Dendrobie*. It is flowering now in many collections, and where plenty of plants are grown will continue in bloom over several months. *D. aureum*, although not a very showy species, is noteworthy from the fact of its being one of the parents of several of the finest hybrid *Dendrobie*s in existence. It is too well known to need any description, but a line on its culture might be interesting to beginners. Not being a very large grower, the receptacles used for the roots should be of medium size only, and I have found nothing better than the ordinary make of pot or small hanging pans. The compost may consist of the usual peat and Moss mixture, about an inch of this over good drainage sufficing for ordinary sized plants with two or three leading bulbs. Frequent disturbance is unnecessary and harmful; in fact, the plants may be in the same pots for a dozen years provided the old material could be got away and new substituted. But in the ordinary course once in three years is quite often enough to renew the compost, and considerable care is needed in removing the plants from the old pots, the roots, if they have done well, usually having a firm hold upon them. Remove all dead roots and sour or decayed compost without damaging those that are fresh and alive more than can be helped. Bed the new material firmly about these, and fix the plant with the base of the last formed pseudo-bulb just resting on the top of the compost, this being trimmed off neatly in the form of a rather flat cone. The best time to repot is after the flowers are over and the young growth is forming, but before this commences to root independently. The young roots then give the plants a good hold upon the new material. After repotting, place the plants in a warm, moist house and give only a very little water until the roots are taking a good hold of the soil. A light, sunny position and abundance

of atmospheric moisture is now required, supply to the roots being increased by dew until the young pseudo-bulbs are fully developed when the plants should be taken to a light, sunny, and rather dry house, there to ripen rest until the flower buds appear. *D. aureum* is one of the most widely distributed *Orchids* occurring over an immense area in Asia. It has been collected by scores of different Orchid seekers, but first of all by Gibson, who found it growing in the Khasia Hills, and sent it home in 1837.

#### SHORT NOTES.—ORCHIDS.

**Masdevallia glaphyrantha.**—This hybrid was recently in fine flower at Cambridge Lodge, where Mr. Chapman grows it well in company with the *M. Harryana* and similar kinds. The tube of the flower is brownish-erimson, the sepal yellowish with a purple border, the lower purple beneath with golden-yellow tails.

**Catasetum colosum.**—This species is seldom seen, but I noticed last week a fine spike bearing ten flowers in Mr. Bull's nursery. The sepal petals are a light sepia-brown, the lip broadly shaped at the base, the front lobe elongated, narrow, bright green—a very peculiar combination of colour. It is a native of La Guayra, whence it was introduced in 1840.—H.

**Cypripedium Arthurianum.**—In this hybrid we have a striking example of the potency of the old *C. usigne* as a parent. The sepals, petals, and pouch come very near in colour to some of the *usigne* varieties, but the drooping recurved petals remind one of *C. Fairricanum*, its pollen parent. The plant was raised in Messrs. Veitch's nursery Chelsea, only one plant, it is said, resulting from first sowing.

**Oncidium crispum grandiflorum.**—A plant of this with eighty-three fully expanded flowers on one spike. There would have been about 100 more, but they got rubbed off. Is that good? A *Dendrobium formosum giganteum* has ten flowers on a spike.—H. KRUSE.

\*\* Yes, very good indeed. We do not remember ever having seen a larger number of flowers on one spike, and a note on your method of culture would be interesting. The *Dendrobium* is good, but not unusual.—Ed.

#### AMERICAN NOTES.

[From *Garden and Forest*.]

**THE NEWTOWN PIPPIN APPLE.**—The first of this season's fruit, from Virginia, were offered here last week and sold mainly for export at from 5 dols. to 8 dols. a barrel. Owing to the weather during the past month there is second-grade fruit in this crop than was expected. This means smaller Apples, lower prices, according to experience in other years, and keeping qualities.

**FILBERTS.**—Cultivated Cob Nuts, or English Filberts, have been imported within the week from Kent, England. These fresh nuts are sold in their husks, and fifty cents a pound is willingly paid by those who esteem delicate meat. Chestnuts, from cultivated trees in New Jersey, sell for forty cents a quart. Eighteen of these immense Nuts weigh a pound and two dozen fill a quart measure. Some of the largest weigh 2 ozs. each.

**LYCORIS SQUAMIGERA.**—This noble flowered Chinese *Amaryllis* grows in California with surprising luxuriance. It is freely used at Golden Gate Park, at San Francisco, where it grows without irrigation, increasing rapidly and produces in September abundant flowers 3 feet or 4 feet high. It is more vigorous and beautiful, and apparently much more hardy here than in the Eastern States, where, however, it is perfectly hardy.

**THE CANADIAN YEW** (*Taxus canadensis*) is a low shrub, with nearly prostrate, wide-spreading

branches, and is a common inhabitant of northern woods, often covering large areas of moist soil in their dense shade, and is distributed from Newfoundland to Lake Winnipeg and southward to Virginia and Iowa. This course, a perfectly hardy plant, although it thrives in moist, shaded soil, and it can be used more frequently than it is to be the grounds in parks and gardens.

*YEW CUSPIDATA* inhabits Manchuria, Corea and the island of Yezo, where it is widely scattered through the forests of deciduous trees, and where it often rises to the height of 50 feet with a tall, straight stem freely 2 feet in diameter. In Japan this Yew favourite garden ornament, being one of the plants most generally cut into fanciful shapes, for, like the other species, it can bear shears. It was introduced into the eastern United States in 1862, and has proved to be perfectly hardy as far north at least as Boston; grows rapidly in cultivation and promises to become here a large, long-lived tree, and a very important and valuable addition to the list of evergreens which can be successfully cultivated in the Northern States.

THE PACIFIC COAST YEW, which under favourable conditions becomes a tree 80 feet in height, with a trunk occasionally 4 feet in diameter, has not been fairly tested yet in the east. It grows not only on the coast as far north as the Queen Charlotte Islands, but it spreads eastward to the western slopes of the northern Rocky Mountains in the United States and to the Selkirk Mountains in British Columbia, where the winter cold is much more severe than in New England. The snowfall, however, is lighter, and small plants are protected all winter and until late in the spring by a deep covering of snow, while in summer the ground, shaded by the dense coniferous forest, never becomes very dry in the situations which this species selects.

THE DEAN HOLE.—A few specimens of this Rose have been on exhibition in the show window of W. H. Brower, on Broadway, within the past week. These partly opened, firm buds suggest flowers of large size when fully grown. The Dean Hole Rose differs from the cream-tinted President Carnot, which pales under gas-light, in that its rich shell-pink petals are particularly beautiful in artificial light. For this reason it is likely to be in special demand for winter decorations, and it is expected that the supply will be large enough this winter to provide some of the smaller flowers for this use. The stems are strong and the foliage is luxuriant and pleasing. This Rose was first shown two years ago at the dinner given in honour of Dean Hole in this city.

THE GERMINATION OF CONIFER SEEDS.—A great difference exists in the germination of conifer seeds from different localities. I have never seen this fact stated in print and give my experience in the hope that others may do likewise. The seeds of all the conifers hardy in the east come up at the same time or nearly so. Norway Spruce, White Spruce, Scotch, Austrian and Mountain Pines, the Colorado conifer, *Picea pungens* and *P. Engelmanni*, Douglas Spruce, *Abies concolor*, and other common conifers can all be uncovered at one time. But the seedlings come up ten days after the first one appears, while conifer seeds from a warmer climate are very irregular in germinating. I raised a large quantity in California in 1889 and 1890. The kinds already named were sown in beds adjacent to the more tender kinds, *Pinus boreyi*, *P. ponderosa*, and *P. tuberculata* started from two to four weeks before the others came up. *Abies magnifica*, *A. grandis*,

and *A. amabilis* came at long intervals; the first of these appeared in April and the last in September, and they required careful attention. The various kinds of *Cupressus* varied as much as those of the *Abies*. Douglas Spruce, *Abies concolor*, and *Pinus ponderosa*, from Colorado, came up much more regularly than the same species from seed collected in California, but the seedlings from California seed made much larger plants at the end of two years. Most of the seed from the Orient acted as those of our native and European species do, being very regular in germinating. The exceptions are *Picea Morinda* and *P. ajanensis*, but as I had very little seed of the latter, and that apparently two or more years old, I may be mistaken in this particular. The seeds of *Sciadopitys verticillata*, *Cedrus Deodara*, and *C. Libani* are also irregular in time of germinating. *Cedrus atlantica* may also be added to the list, but it comes up more evenly than the seeds of other Cedars. The seeds of our native White Pine are the most uneven in germinating of those of the hardy conifers; but although they sometimes come irregularly, this tree can hardly be classed with the species which are irregular in germinating. *Thuja gigantea* and *Libocedrus decurrens* are irregular.—R. DOUGLAS.

THE SWAMP MAGNOLIA (*M. glauca*) varies from a deciduous shrub at its most northern limit to an evergreen tree in the extreme south. Its most common form is that of a shrub from 6 feet to 20 feet high, having extreme beauty of foliage and flower and delicious fragrance. The growth is very rapid, ranging in one season from 6 inches to 5 feet, and the flowering branches develop normally three growing points, of which one usually far outgrows the others. The flowers, the smallest of our native Magnolia blossoms, are of an exquisite ivory-white from 2 inches to 3 inches in diameter; they are borne on short stalks with outspread leaves that fall and flutter about the flowers, so that, except for their perfume, one might easily pass a blossoming shrub without seeing any of the flowers. The small fruit-cones, about 2 inches long, have scarlet seeds.

The written records of this Magnolia begin with that first voyage to Virginia in 1584, where on the islands of Pamlico Sound its beauty and fragrance were noted by those keen-eyed old sea-dogs, whose conciseness of description is unequalled. A century later that careful observer and judicious collector, the Rev. John Bannister, took plants of *M. glauca* from Virginia to England, where they were planted in the Episcopal garden, at Fulham, by Henry Compton, Bishop of London. Here the Magnolia found an old swamp friend in the fine large tree of Red Maple, taken over some thirty years earlier. About this time the Rev. Cotton Mather, also busy with observations and collections of a less pacific nature, as he was journeying from Salem to Gloucester, paused in his pursuit of witches in order to discover the source of an unknown fragrance, and made known that farthest north colony of *M. glauca* that has since given its name to the town of Magnolia. Exportations of Magnolia to England were continued early in the eighteenth century, for Collinson in 1735 wrote to Bartram "not to send any more cones of your Swamp Laurel," but the demand must have increased, for two years later he wrote for more cones, saying "it is a fine plant, and when the wind turns up the silken side of its leaves it has a pretty effect." It is figured and described in Catesby's "Hortus Britanno-Americanus" as *Magnolia laurifolia* (edition of 1763) and mentioned as one of the American plants with which "England should be enriched."

NOTES ON STRAWBERRIES.

WE have to thank our readers all over the country for so kindly replying to the following questions, and we hope that the notes will prove valuable :-

*Will you kindly aid us in throwing some light on Strawberries of best quality for the use of private growers, as market growers have a different standard from that which applies to the private gardener, and favour those kinds that bear carriage, rather than those that are remarkable for flavour and quality? For those who use their own fruit we think that a different standard should be in use.*

1. *What kinds do you consider the best for flavour in your district, i.e., as grown in gardens, not taking into account those grown in the open field for market?*

2. *The best early and late kinds for the open air in your district?*

3. *Which of the newer sorts do you find most worthy of cultivation from a garden point of view?*

4. *The best time to plant so as to secure the best and most regular crops?*

— Strawberries have been an excellent crop and the quality has been good all through the season. The varieties I find best here for private use are Royal Sovereign (the best variety yet raised), British Queen, Sir Joseph Paxton, Gunton Park, Elton Pine, Latest of All, Sir C. Napier, and Monarch. The best fruits are obtained from one year old runners, layered into pots and planted out the first week in August. The ground is prepared as follows: A very heavy dressing of manure is dug in 2 feet deep and mixed with the soil in digging. Then the ground is made firm, a good dressing of old Mushroom dung is spread on the surface, lightly forked in and trod down again before planting. I plant at 3 feet between the rows and 18 inches in the rows, pressing the soil firmly round the plants. The result is a grand crop of fruit the following year.—J. SMITH, *Mentmore, Bucks.*

— The kinds that are most in favour here are Noble, La Grosse Suerée, Dr. Hogg, Keens' Seedling, President, Royal Sovereign, and McMahon. I consider Noble the best for early use. Certainly it lacks flavour, but it has an excellent constitution, is a heavy cropper, and comes in a week before other kinds. To follow I find the other kinds named do well. Royal Sovereign is a very strong grower and crops freely, but the fruit is of a very dull colour and has an acid taste. In my opinion the best flavoured Strawberry is the old Keens' Seedling, a kind that is fast being pushed out of cultivation by the newer kinds that are constantly being introduced. For late use I grow McMahon, a fine fruit, plant robust, and good doer, but unfortunately it does not colour well at the point. For pots I grow three kinds, viz., Noble, Keens' Seedling, and Royal Sovereign. I find Noble an excellent one to come in about the middle of March. To follow about the middle of April, I like the old Keens' Seedling on account of its flavour, and Royal Sovereign for its heavy cropping qualities. I consider the best time to plant Strawberries is about the middle of July. It is not advisable to allow the plants to remain long in one place. The plan I adopt is to start on one side of a plot of ground and destroy a portion of the plants every year. From the ground that I intend to plant this year I take off a crop of early Potatoes, then manure well, dig deep, plant firm, and water well. By so doing I can secure a moderate crop of very fine fruit the following year.—B. MARKS, *Hardwick Gardens, Bury St. Edmunds.*

— The best kinds of Strawberries in this neighbourhood are President, Auguste Nicaise, Wizard of the North, and Vicomtesse Hélicart de Thury. The best early Strawberries are Vicomtesse H. de Thury and La Grosse Suerée. I grow

a few Noble for the first gathering, but the quality is not good. The best late kinds are Wizard of the North and Loxford Hall Seedling. The only new sort that I know of grown in this district is Royal Sovereign, and all that grow it speak very highly of it. The best time for planting is early in August. I usually plant out as soon as the forcing plants are potted up, which is from the end of July to the first week in August.—A. G. HOOKINGS, *Olddown House, Almondsbury.*

— Strawberries, taken on the whole, do very well in this and immediate neighbourhood. I find President, Vicomtesse Héricart de Thury, Sir Joseph Paxton, and Noble do well here. The above kinds I consider the best for this district. I find Noble the earliest of the above sorts, and Sir Joseph Paxton the latest. Royal Sovereign I find the most worthy of cultivation of the newer varieties. The beginning of September is a very good time to plant out the general crop of Strawberries, the ground having previously been prepared for them, also the runners layered into 3-inch pots.—W. STANTON, *Cuddington Hall, Dunstable.*

— The best kinds of Strawberries for flavour I find are for early use, Royal Sovereign, Paxton, and President. British Queen I have failed with, but I have seen some very good samples grown in the district. The best early kind is Royal Sovereign. Oxonian is a good late kind, but not very sweet, so probably Waterloo is the better flavoured. Among the newer varieties I grow, Royal Sovereign is the best for all purposes. The best time to plant is early in August. These will bear well the following year. Destroy after two years if possible.—J. HILL, *Babraham Gardens, Cambridge.*

— The site on which the Strawberries are grown here seems well adapted for their requirements. The ground, on a sharp slope towards the south, is a heavy loam in which a quantity of shale had been mixed during the formation of the gardens. The variety that finds most favour here is British Queen, which I consider the best for general use when it does well. Here I gather fine-coloured fruit well ripened to the point, not very large, but of excellent flavour. The best earlies are Royal Sovereign and John Ruskin, and for late work I prefer Dr. Hogg. Of the newer sorts tried in these gardens, Royal Sovereign is by far the best, and as a forcing variety is in great demand. The best time for planting is as early in the season as plants are procurable, which in this late district is in the latter part of August or early in September.—FREDERICK HARBON, *Eastwood Grange, Ashover, Chesterfield.*

— The best Strawberries grown here, on a light warm loam highly manured, are John Ruskin, Vicomtesse Héricart de Thury (better known locally as Garibaldi) and James Veitch, in their order of ripening. Nearly every popular Strawberry has been tried within the past quarter of a century, but the three named succeed the best, and these I grow in quantity. John Ruskin is best when treated as an annual. I have abundance of forced plants, and these I plant out in May or June and obtain a heavy crop from them the following year. After bearing once they may be trenched down, planting a fresh lot every season. Garibaldi is easily grown under all ordinary circumstances, and never fails to bear except when cut off by late frost; but after the first picking it is apt to run small in warm weather. James Veitch gives more than double the bulk of a crop of any other Strawberry that is worth growing on the hot, dry soil, and in such a soil it is firm, highly coloured and excellent in flavour, not at all like the same variety when grown under different conditions on a stiff, cool soil, where the Elton and other Pine Strawberries flourish so well. In this district, within a radius say of ten miles, the soil, exposure and altitude vary so greatly that no variety can be safely trusted to do equally well all over it, either for early, main or late crops. Generally speaking, Garibaldi is the favourite in private and market gardens for an early crop, but Royal Sovereign is

doing well generally, and as it is a fine showy fruit and of tolerable flavour, it may come into use as the earliest market Strawberry. Moffat's Duke of Edinburgh and President are grown to some extent on good Strawberry soils, where they succeed well as the main crop; and Elton Pine, where it does well in high-lying and cool districts, is by far the best late Strawberry, remaining in fine condition in good seasons till the month of October. Some very promising varieties of Strawberries have appeared in recent years, but none of them have been sufficiently tested to warrant a definite opinion as to their merits.—M. DUNN, *The Gardens, Dalkeith, Midlothian.*

— The undermentioned varieties of Strawberries I consider the best for this district, viz., King of the Earlies, Royal Sovereign, Sir Joseph Paxton, Keens' Seedling, Monarch, Eclipse, Waterloo, and Latest of All. I find Royal Sovereign and Monarch the most worthy of cultivation of the newer sorts in this district. I always try to get strong plants in pots by the middle of August, and then I commence planting, and at once mulch with decayed manure. By so doing I never fail to get good crops of fine fruit. Some gardeners plant late in September and October, but I have never seen good results from late planting.—C. E. MARTIN, *The Hoo Gardens, Welwyn, Herts.*

— Vicomtesse grows to a good size here, and gives general satisfaction. Royal Sovereign, President, and Sir J. Paxton are the ones generally relied upon. Vicomtesse, Royal Sovereign and Leader are the best early kinds, with President, Sir J. Paxton, Latest of All, and Waterloo for late work. Of the newer sorts, Royal Sovereign, Laxton's Leader, Gunton Park, and Monarch are the best I have grown. The plan I adopt, and which is very successful here, is, as soon as the second crop of Peas can be cleared off the ground, to plant those that have been forced, which is generally towards the middle of July, the ground having been prepared for their reception in the autumn. Here they fruit twice before being destroyed. A new plantation is made each year, the plants are put out 2 feet 6 inches from plant to plant, and 3 feet between the rows.—GEO. H. MAXCOCK, *Luton Hoo Gardens, Beds.*

— The best kinds with me, taking flavour and cropping qualities into account, are Royal Sovereign, President, and Paxton; the best early sorts, Noble and Royal Sovereign; the best late, Waterloo. Of the newer sorts, Gunton Park I think a good useful sort. I find the best time to plant is the last week in July or the first week in August, so as to get the runners well established before winter.—CHAS. DEANE, *Cassibury Gardens, Watford, Herts.*

— Pauline, Royal Sovereign, La Grosse Suerée, Auguste Nicaise, Waterloo and Oxonian are my favourites. I tried for several years to grow President and Sir J. Paxton, both grand in some places, but with me very subject to mildew, so I have done away with them. I can send fruit of good quality to table from early in June to the last week in July from the above list, all of which are good travellers. I have tried Frogmore Late Pine, Elton and one or two other late varieties, but nothing does so well with me as Oxonian. Planted in open quarters it succeeds Waterloo, and on a north border it is grand for several weeks after all others are over. My practice here for close on twenty years has been to let well alone, not disturbing my permanent beds under six or seven years, and scarcely ever digging between them. Hoeing and top-dressing lead up to the greatest success in our light sand and gravelly soil. When I do make new beds I like spring planting from runners pricked into nursery beds the previous autumn, giving them 2 feet apart each way upon ground trenched two spits deep, and a foot below that turned over, but not brought to the surface, the whole very liberally treated with good farmyard manure.—C. DEAVIN, *Harewood Lodge, Sunninghill, Berks.*

— I only grow a very few sorts here which I find to serve me best. The soil is very gravelly and light, and therefore not very suitable to

Strawberries. The best kinds for flavour Pauline, John Ruskin, Royal Sovereign, President, Sir Joseph Paxton and British Queen. The early and late kinds in this district are Noble, Royal Sovereign, Sir Charles Napier and Waterloo. I find Royal Sovereign succeed well in this district. The best time for planting is early in August, or the middle or end of July, for plants which were forced in the spring.—COOMBES, *Englefield, Reading.*

— I have found the following to be the best flavoured Strawberries after trying a great number of varieties: Dr. Hogg, Veitch's Pétion, La France, Lord Suffield, Latest of All, President. The best early varieties are Laxton's No. 1, Royal Sovereign, and La Grosse Suerée. The first two ripened their fruit at the same time, growing under the same conditions under a south wall. The three best late varieties in my order of ripening are Frogmore Late Pine, Waterloo and Loxford Hall Seedling. The best time to plant is the end of July or the first week in August.—W. DAVIES, *Nidd Hall Gardens, Rye, Yorks.*

— The best varieties for private use here are Royal Sovereign, Auguste Nicaise, President, Dr. Hogg, Frogmore Late Pine, Latest of All. These three best varieties to depend on in our dry soil are Royal Sovereign, Auguste Nicaise and President. For preserving I still grow End Scarlet in preference to any other variety as it retains its colour, shape and flavour after being boiled. I obtain the best results from planting young plants in July every third year in a deep dug or trenched, unmanured ground, made perfectly firm and hard, mulching heavily in the spring just as the plants commence growth with fresh horse manure. By digging and preparing the ground some weeks before required for planting a distinct advantage is gained.—T. CURRIE, *Wilton House, Salisbury.*

— I should place Vicomtesse Héricart de Thury first for flavour in this district; indeed for any purpose it is hard to beat, the first three gatherings are usually of a good size for table use, and the smaller fruits make excellent preserves. It has also the merit of being a grower and free cropper in almost any soil. Sir J. Paxton, President, Aberdeen Favorite, &c., are also of very good flavour here. The best very early and late sorts, irrespective of quality, are Noble and Myatt's Improved. The former only satisfactory from one-year-old plants. The best time to plant is early in September, the plants get a good hold of the ground in winter, and may either be allowed to bear fruit the following season, or by pinching the flowers and runners they give a very heavy crop of fine fruit the second year.—J. IRONSIDE, *Edrom.*

— The best flavoured Strawberries grown in this neighbourhood are British Queen, Dr. Albert, King of the Earlies, Royal Sovereign, Gilbert Pine, Gunton Park, Sir Harry, Victoria, and Vicomtesse H. de Thury. The best early is King of the Earlies, Royal Sovereign, Noble, and Vicomtesse H. de Thury; the best late: Elton and Waterloo (very late, shy bearer).—F. J. BOURNE, *Boughton House, Kettering.*

— The best for flavour as grown here are Royal Sovereign, General MacMahon and President. The best earlies are Royal Sovereign, Noble; the best late, Elton Pine, Elton Pine Improved, and Latest of All. Of the newer sorts most worthy of cultivation is Royal Sovereign. The best time to plant so as to secure the best most regular crop is in August or September. If set out then the plants are well rooted and established before the winter sets in.—D. HULL, *Tulloch, N.B.*

— I find Royal Sovereign a good all-round variety. It is the earliest I grow, very prolific of good colour, size, and flavour, firm and it will travel well for mid-season. Lord Suffield and Gunton Park are of good flavour and firm. For late work Latest of All is the best. British Queen does wonderfully well on our light sandy soil.—G. R. ALLIS, *Old Warden Park, Biggleswade.*

STOVE AND GREENHOUSE.

CHRYSANTHEMUMS FOR THE CONSERVATORY.

produce a pleasing and graceful effect, and to show up the relative merits of the Chrysanthemum for inside decoration, different ways of growing the plants must be carried out. Happily, in my case the objects are cut bloom for conservatory decoration; hence there can be grown bush plants, plants on single stems, and down plants and a good percentage for large blooms, which, as shown in the annexed engraving, tell well in the background amongst overhanging Palms, Dracenas and the long sprays of Fuchsias drooping from the pillars. A mixed arrangement of this kind with an ample background of Palms and fine-foliaged plants, and a judicious mixture of other plants has a very telling effect. Poinsettias, Euphorbia and Calanthe Veitchi add wonderfully to

3 inches long and an inch wide. Though heart shaped at the base, they taper off to a point. A variegated-leaved variety of this was awarded a first-class certificate by the Royal Horticultural Society during the present year, and when sent out will no doubt be a good deal sought after. The curious manner in which the upper portion of *F. stipulata* will thicken out and produce large leathery leaves and occasionally fruits is now pretty well known, and doubtless these other kinds will sooner or later show the same character. —T.

**Eranthemum tuberculatum.**—Though differing widely from each other in general appearance, many of the Eranthemums are very beautiful flowering plants, and, in nearly every instance, of easy culture. The various species flower at different times of the year, some of them being very attractive during the autumn and winter months. One now in bloom is *Eranthemum tuberculatum*, which was introduced from New Caledonia in 1863. It forms quite a little bush, composed of slender branches, clothed with small ovate leaves. The flowers, which are freely borne on the shoots,

winter. The process of propagation, which usually begins in January, is first to remove some of the outer leafage, then to notch slightly the bases of the crowns in layer fashion, then to drop the plants into pots a good size larger, and to place round the tops an inch of fine sandy soil. If stood in gentle warmth, rooting soon follows, and when each plant is lifted from the pots and the newly-rooted parts are severed from the old, then got into small pots and returned to gentle warmth, very quickly are sturdy plants obtained. When shifted into 4½-inch pots and warmer weather has come, the best place is a cool span-frame, where standing on a firm ash bed good growth is continued, and later they are got into 6-inch, or if very strong into 7-inch pots, and in these well established, soon begin to carry bloom. When I saw these plants very recently there were amongst them heads from 12 inches to 15 inches over of Marchioness of Exeter, White Lady, Lucy Hillier, Mrs. Barron, and others. What a quantity of pure white flowers such a variety as White Lady produces, and how admirable are these to gather and wire for bouquets or button-holes. The old double white may be free-flowering, but the blooms are much smaller. The layering seems not only to ensure the production of roots more readily, but also helps to create finer plants. The work needs to be done with care, but the results well repay the trouble taken.—A. D.

TUBEROSES IN WINTER.

As the Chrysanthemum season gets past, the Tuberose, though less showy, fills up a void, and is grown so easily, that anyone with a temperature of 55° may have blooms from October to Christmas, or even later. In a note a few seasons ago I advised growing the Tuberose with less heat, thus getting stronger spikes, but I did not touch upon its culture for mid-winter supplies of cut bloom. Since then I have seen Tuberoses planted out and lifted like other autumn plants with great success. Of course, planting out is not advised in any soil or position, and even under the most favourable conditions a good season is essential to success. Plants grown thus are remarkable for their sturdy habit and strong spikes of bloom. I follow a midway course, using pots, thus saving the potting up. At the same time the plants are grown as hardy as possible, never giving any heat till October, or even November, just as the blooms are opening. To get bulbs to flower at this season it is essential to pot up later than is often practised, but there must be no forcing of any kind. I always secure the best ripened bulbs. The Pearl is the best variety for the purpose; indeed, in my opinion, African bulbs are so inferior that they are not worth growing for the purpose named. The bulbs when received are spread out thinly on shelves in a cool, dry fruit-room and occasionally moved about, any side growths which show being removed. The potting up is done during April and May, one large bulb in a 4-inch pot or three in a 6 inch or 7-inch pot will suffice. Firm potting is essential. When potted the bulbs are well watered, placed in a cold frame, covered with fine ashes and left till the roots are running round the sides of the pot. It may be asked, why place in frames if the bulbs need no protection? This is done to throw off heavy rains, as excess of moisture at this stage is fatal. The sashes are only used in rainy weather. Failing cold frame room the plants may be plunged in the open and anything which throws off the moisture placed over them. When top-growth is a few inches long the plunging material is removed and the plants are fully exposed all through the summer. Towards the end of August they will be strongly rooted, very dwarf, and take occasional supplies of liquid manure, care being taken not to pour the latter into the



View in the conservatory at Broughton Hall, Yorks. From a photograph sent by Mr. J. Rainbow.

kind of decoration, giving effect and brilliancy, and also varying the arrangement. Unquestionably such an arrangement is far superior to where large blooms only are used.

J. R.

**Ficus falcata.**—Of the small creeping kinds of Ficus that we have now in our gardens, and which are particularly valuable for clothing damp walls and for similar purposes, by far the best known is *F. stipulata*, or repens as it is frequently called, and the still smaller variety of it—*minima*, which is exceedingly neat in growth. To these may be added *F. falcata*, which is well adapted for the same purposes as the others, the style of growth being similar; but the leaves are totally different in shape, being peculiarly curved, hence the specific name of *falcata*. The leaves are about 5, about an inch in length, and of a deep green colour. It grows very freely under favourable conditions when it is once established, and its roots just as *F. stipulata*. Besides these there is the larger and looser growing *Ficus* species, whose leaves are each from 2 inches to

are pure white, each nearly 1½ inches across, and in appearance somewhat suggesting *Bouvardia Humboldtii corymbiflora*. As it will flower freely when little more than a foot high, and in a pot only 5 inches in diameter, it is particularly adapted for small structures. This *Eranthemum*, in common with most other members of the genus, requires the temperature of a stove. Another species now in bloom is the upright-growing *E. Andersoni*, whose white flowers, marked with purplish lake, vie with some of the Orchids in their colouring. *E. albiflorum* is a rather uncommon kind, whose upright panicles of blossoms are very like sprays of white Lilae. Those grown for the sake of their foliage—notably *E. reticulatum*, whose bright green leaves are heavily veined with gold, *E. albo-marginatum*, *E. tricolor*, and *E. atropurpureum*—are bright and attractive at all seasons.—H. P.

**Double Chinese Primroses.**—The huge plants of these which are now in quantity at Woodside, Leatherhead, demonstrate in a forcible way the ease with which not only the finest varieties may be grown, but their exceeding value for supplying beautiful double flowers during the

hearts of the plants. Early in October or at the end of September it will be necessary to shelter them, as a few of the strongest will be throwing up spikes, and these may if required be given more warmth. The bulk of the plants, however, is left in the frames, not being given heat till November. Grown thus the plants give a winter supply of bloom and last a long time. There is less fear of the bulbs failing to flower, and by this mode of culture they may be had in bloom all the year, as it is an easy matter to pot up batches of plants from November till June. G. WYTHES.

#### BOUvardias FOR CUTTING.

The great popularity of the Chrysanthemum has, doubtless, to a certain extent led to the neglect of these beautiful plants. This is a pity, as the flowers of no greenhouse plants are so valuable for cutting. The section represented by Hogarth, Priory Beauty, Dazzler, and the double forms like Alfred Neuner, President Garfield and others is by far the most useful, and greatly to be preferred for cutting to Humboldt corymbiflora or jasminoides. Florists are quite alive to the value of these flowers, and, in consequence, they are grown in very large quantities by the market men, but private gardeners in many cases do not take up their culture with any spirit. The cuttings should be taken as early in spring as possible, and should consist of small, fresh green points produced by cutting back an old plant or two after resting and placing in a slightly warm house. It is important that the cuttings be kept quite fresh and moist from the first. As soon as the cuttings are rooted lift them out of the plunging material for a day or two, and then place the pots where they may be lightly shaded for a little while and in a genial temperature. Top them almost at once, and when growth recommences pot them singly into the smallest-sized pots. By the end of May these should be nice little bushy, hard stuff ready for planting out either in a frame or on prepared borders outside. In the light sandy soil in the west of England I have frequently planted them in the ordinary soil and had capital results, but in most soils and situations it is safest to plant in prepared frames in light, peaty soil, made very firm by ramming both before and after planting. In loose soil the plants make a lot of growth, but give trouble later when they are lifted; but the fine balls of soil that come up with the roots when made firm enable the plants to get over their disturbance almost without a check. After planting give one good watering to settle the soil, but only close the frames on cold nights. All through the summer let the plants have thorough exposure to sun and air, keep them moist at the roots, and anticipate the production of flower-buds by topping frequently. Several times daily the syringe may be lightly plied about the plants, as the abundance of fresh air and light does away with any possibility of softness in the growth. About the middle of September the plants may be lifted and potted into fairly large pots, soaking every part of the soil well a day or so previously. Pot firmly and stand the plants in a sheltered shady spot for a few days before housing. Any light sunny house or frame, where a little fire-heat may be turned on at night so as to allow of ventilation by night and day will suit them. It is the greatest mistake to coddle them by allowing fire-heat except as indicated. Still keep the syringe going among them and around the pots; there need be no fear of soft growth provided plenty of air and an unbroken light are afforded. The result of this treatment will be plants absolutely covered with flowers, and they keep going for months. When the best of the blossoms are past, they may be cut back and kept slightly drier at the roots, the treatment the second season being the same as for young plants except that they will naturally require more room in the frames and subsequently larger pots. The specimens, as a matter of fact, may be kept going for an almost indefinite number of years, but it is

not advisable to keep them too long. Any old ones not required again may be planted out in the flower garden, for they are naturally summer-blooming, and only induced to flower in winter by the frequent pinching advised above. Bouvardias differ from many greenhouse shrubby plants in that they cannot be forced, but the retarding system may be easily carried out, and of course serves the same purpose. R.

**Bouvardias Pride of Brooklyn and Pride of Rochester.**—I have several times heard the above varieties mentioned. By their names they would appear to be of American origin, but I do not know either of them. I shall be glad to know if any of your readers have grown them, and if they are distinct from other varieties now grown in this country. I have already met with what I first knew as Vreelandi under three other names, viz., The Bride, Alba elegantissima and Davisoni, and it is probable that those referred to above are old sorts re-christened.—A.

**Raising Lotus seed.**—Having had some Lotus seeds sent me from India, I shall be glad if you will tell me how to grow them.—DORA L. WADHAM.

\*\*\* Seed of the Lotus should be sown in well-drained pots filled with sandy loam. The seeds may be covered with about their own depth of the same soil, when the pot or pots should be stood up to the rim in a tub of water. A stove temperature is necessary—that is, a structure which in the winter does not go down below 60°. When large enough the seedlings may be potted off, using the same compost, but as they get older a little well-decayed cow manure is of service. The Lotus may be grown moderately well in a large pot stood in a tank of water which is heated by hot-water pipes passing through, but it is seen at its best when planted out in a bed of mud, under which conditions it succeeds remarkably well at Kew in a corner of the tropical Water Lily house.—H. P.

#### RUST ON MALMAISON CARNATIONS.

IF by "rust" on these plants "J. R." (see p. 360 of THE GARDEN) refers to that terrible pest *Helminthosporium echinulatum*, I can only say that so far no remedy is known to exist. I take it by the way it affects his plants that this so-called rust is the same that troubles large growers here, and which has in its day ruined thousands of well-grown plants. Some years ago I read in a contemporary that "picking and burning" was the only cure, but, of course, such a method if followed up would be just as disastrous in its results as any disease possibly could be. What makes the above disease so utterly beyond the reach of any remedial measures is the fact that the fungus vegetates within the cuticle of the leaf, and having reached a certain stage of maturity eats its way through the upper and under surfaces of the leaves, and, bursting, casts its minute grains in all directions. Indeed, so fatal is it to the whole of the Malmaison group in this district, that large growers who hitherto had several houses 108 feet by 24 feet occupied by these plants have quite given up their cultivation. For some years I tried to combat this disease myself, and spent a lot of time in the endeavour to rid the plants of such a pestilence. The fungus appears to revel mostly in low districts, particularly those in the vicinity of some large river, and once the disease takes possession of a large-leaved variety, like the Malmaison, it is almost a hopeless case. A few at a time I burned the worst of my plants, till at length the whole of my stock, close upon 3000, went to the fire-heap. I have still traces of the fungus remaining, and as soon as I notice it upon the plants I get a little sulphur mixed to the consistency of thin mustard and paint

lightly over the place, taking care always to leave a goodly amount of the sulphur when I think the mature fungus will cast its spores. By this application I notice a distinct change in the colour of the fungus, and a certain inability to spread by reason of the added weight of sulphur. The latter in no wise prevents the fungus vegetating at the time, yet I hope it will arrest its vital powers for the future. Of course even this is tedious, and does not add to the beauty of the plants, though it is better than picking off the entire blade. The fungus gets in low-lying districts would appear ever present and simply awaiting a resting-place for its spore. So long as a leaf remains perfect fear need be entertained, but the slightest abrasion of the skin is sufficient to account for its presence, and once located on any part of the leaf is easily transmitted to other portions of the same leaf, and in due time vegetates and spreads again. Unfortunately, it is an unspeakable foe, and its presence is not felt till the fungus is about half developed, when it may be detected by a slightly uplifted portion the size of a pinhead and of an ash-grey tint. To the large-leaved kinds it is deadly, while the smaller leaf sorts appear proof against its attacks. Very curious, too, is the fact that in certain localities at higher altitudes these very plants can be grown with perfect ease and immunity from attacks. E. JENKINS

Hampton Hill.

#### OUR GLASSHOUSES IN FLOWER GARDENS AND ON LAWNS.

To many, a good big glasshouse is a near approach to an earthly paradise, and to such, to those who never take notice of the beautiful things about them in the home views of a country place, little need be said. No do they will go on covering the land with glass just as Guernsey has been covered of late years. But to those who think of beauty in our home landscapes, the position of the glasshouse in flower garden or pleasure ground is a serious matter, and some of the most interesting places in the country are defaced by glasshouses out of place. In the various dividing lines about a country house there can be no difficulty in finding a site for the glasshouse where it will be out of the way of doing harm to the views. There is no reason for placing a glasshouse in front of a beautiful old house where its colour mars the prospect. Very often, in looking across the land towards a country house, we see first the glare of an ugly glass shed. If this only happened in the garden of people lately emerged from the towns of the suburbs of our great cities, it would not be so remarkable; but when some of our finest country places like Knole, West Dean, and Goodwood are disfigured in this way, it is time to say something about it. For, apart from the fine old houses and the landscape being defaced by the hard lines and colour of the glasshouse, there is the result on the garden itself, or our efforts to get any harmony or refinement of colour in the flower garden. Our troubles in the effort to get plants into harmonious and beautiful relations we can testify from long experience are very much increased if we have a horror in the way of a glass shed staring us. It may be; indeed, in two places I have lately seen it placed in the middle of the lawn, with the smoke from the early fires arising, and perhaps a load of coal on its way to the stokehole! Is it any wonder in face of such things to find the artist driven from the garden though we may discover him near the horse farm or the cottage?—Field.

## CHRYSANTHEMUMS.

## CHRYSANTHEMUMS OUTDOORS.

ALTHOUGH Chrysanthemums are imported in immense numbers annually from the Continent and America, in addition to the hundreds of home-raised seedlings yearly grown, with a few to the discovery of new and improved kinds, we do not make much headway in raising for the outdoor garden varieties which may be called really hardy sorts, such as will live through the winter for some years, and make their growth and develop a crop of blooms without any protection. If we had such varieties which would meet the requirements named above, many otherwise dull gardens would be made bright during the winter months, but we must fall back on the old-established kinds.

At the present time a good selection of varieties can be had which in reasonable seasons

Plants which have been growing in the same place for several years get worn out and exhausted. They should be dug up and divided, discarding the centre of the roots if plenty of stock is obtainable from the outer parts of the clump, where sucker-like growths will be found much more vigorous than those in the centre. Pieces of roots 3 inches square make nice bushes the first year if a little fresh soil is placed about them, just digging over the ground deeply, at the same time adding some half-rotten manure. If the plants are put out on a new piece of the garden it will not be necessary to add new soil, but where they are simply dug up and replanted again, it will be essential to give fresh soil to promote a free growth, without which a full crop of blossoms cannot be had. Care must be taken that the soil is not made too rich, or the growth will be immature. In that condition the plants will suffer much more from frost during the winter, very likely to the

aspect which faces either north or west and is overshadowed by tall trees, the growth of the plants in such a position as either of those named being immature. The best position that can be obtained is a border facing south, backed up at the north and east sides with shrubs or other protection. If the plants are carefully cultivated during the summer season, it will not be time ill-spent to provide some means of protection from early or sudden frosts.

The variety illustrated, *M. Gustave Grunerwald*, blooms well in the border in September, and must be classed amongst the best sorts for the open ground. Both in form and colour the blooms are similar to those of *Vivand Morel*, the colour bright pink-lilac, fading to almost white with age. The habit of growth is good, an average of 2 feet being attained.



*Early Chrysanthemum M. Gustave Grunerwald.*

**Chrysanthemums in vases.**—A delightful contrast to the orthodox way of showing the Chrysanthemum has now become the rule at the Highgate and District Chrysanthemum show. Blooms showing high culture are exhibited both on boards and in vases, and in the latter they have made a most effective display. In this exhibition, by an extension this season of exhibits arranged in vases, the whole aspect of the show has been altered. Each exhibitor had studied his own particular fancy, with the result a most diverse method of arrangement was the outcome. This is the most forcible way of illustrating the practical uses to which large Chrysanthemum blooms can be put.—D. B. C.

**Chrysanthemum Souvenir de Petite Amie.**—This is one of Calvat's varieties of 1893, and is well described as having graceful flowers, pure white, first-rate habit, very dwarf, and vigorous. In height it is from 2½ feet to 3 feet, the stems stout and erect, bearing blooms of large size, full, handsome in shape, and very pure in tint. Mr. B. Dockerill, gardener to Mr. G. W. Walker, Elmfield, Reading, grows this variety largely. A fine development of bloom is one of the objects sought by Mr. Dockerill, and he secures plants with five or six stems on the average, each being surmounted by a flower of large size and highly attractive. It is a peculiarity in the growth of this variety that it forms something in the way of a broad flat head, and the flowers being on a level, it is of great value for forming a front line to a batch of plants in a conservatory.—R. D.

**Pompon Chrysanthemums.**—These charming little flowers are very fine this season, the display made in the competitive classes at the Highgate show—always noted for its pompons—being excellent. The flowers were set up in threes, and these, with their deep rich green foliage, called for special praise. The exhibits gave evidence of high culture. The most striking sorts among them were Mlle. Elise Dordan, rose-pink, of unique form; Comte de Morny, bright purple; William Westlake, bright golden yellow; Black Douglas, dark crimson; President, rosy carmine, still one of the best when well grown; Pygmalion, deep rose; Prince of Orange, light orange-amber, a good bright flower; Maid of Kent, white; Rubrum perfectum, deep rich crimson, golden reverse, very fine; La Vogue, bright golden yellow; Frémy, light brick-red, shaded yellow, large, early, limbrated; and Magenta King, bright magenta, very fine.—D. B.

**White and yellow Chrysanthemums.**—These the past year or two have been very fine and also numerous. There are probably no other colours that have received such substantial additions, and in good crimsons and purples it may be said that the novelties of the past two years comprise none at all. For beautiful pure clear whites of very recent introduction we have had from America, Snowdon, Simplicity (a grand flower), Mrs. M. A. Ryerson, and Western King (fine everywhere this season). Ernest Calvat supplies Baronne Ad. Rothschild, Mme. Gustave Henry (early), Princesse de Galles, Mrs. J. Lewis

produce a good crop of blooms, although, of course, much depends upon the weather experienced at the time they are in beauty. Where blossoms are required for cutting, some of the best kinds might be planted in batches in the kitchen garden, choosing a warm border. In cottage gardens one often sees plants fully in flower of sorts that are hardly met with now-days out of such gardens, as the old Emperor of China or Cottage Pink. Many are pompons, a section well adapted for out-of-door culture. The petals, being reflexed and generally imbricated, do not hold the water from heavy dews or rain, as in the case of incurved sorts, for instance, which are really quite useless for outdoor use.

extent of losing the whole crop of flowers. The soil about the roots should be made firm to induce a stocky growth, which produces the best blooms and withstands cold weather. The foregoing note on the culture of hardy Chrysanthemums applies to established plants only. Directly the flowering season is past is a suitable time to replant any that require it. When growth starts in the spring, if the shoots promise to crowd each other they should be thinned, which induces sturdiness—a desirable point in the after success.

Those who now contemplate growing hardy Chrysanthemums for the first time should make a proper selection of kinds and choose a suitable site, which is very important. Avoid an

(an exceptionally fine one this season), Mme. Deis, Mme. Ferlat, and the grand acquisition Mlle. Lucie Faure, while miscellaneous ones of equal merit may be found in Mrs. C. Bliok, Mrs. H. Weeks, Mme. Ph. Rivoire, Emily Silsbury, Lady Byron, Mrs. Rd. Jones, and many more besides. Some of the new yellows are grand in richness of tone, Modesto, Marjory Kinder, Oceana, and Royal Sovereign being perhaps the most noteworthy in this respect. Paler, but not less beautiful, are G. J. Warren (the yellow sport from Mme. Carnot), Australian Gold, M. Massange de Louvrex, Topaze Orientale, and Mrs. C. Orchard. Others such as Edith Tabor, Sunstone, Georgiana Pitcher, and Soleil d'Octobre leave little to desire in their own shades.—C. H. P.

#### CONTINENTAL VARIETIES OF 1897.

Those who visited the leading shows on the Continent last year must have been looking forward with some degree of interest to see how the novelties shown abroad would behave when submitted to English cultivation. It was only reasonable to expect to see some variation in the seedlings that were exhibited for the first time at the French shows last year, and the same when grown here a year afterwards. With very few exceptions almost everything that was considered promising, either at Ghent or at Paris, this time last year has been imported into our own trade collections and in the course of my usual autumn visits, I have naturally looked out for the novelties that impressed me and my fellow visitors the most during our visit to Belgium and France this time last year. Those that appeared to be the best there verify the good opinion that was then formed of them by being the best here, and referring to the original descriptions they seem to be much about the same, although it must be confessed in several cases the colouring under our English sky does not in a few instances appear to be so bright and pure.

From an exhibitor's standpoint, I should say that the following selection comprises all the best of the French varieties that have been distributed this year. Novelties from other sources are lacking in substance and build, although there are a few in which fine colouring is observable.

**DIRECTEUR LIÉBERT (Calvat).**—Japanese; of very large size and compact build; the florets are of medium size, grooved and curly; colour deep lilac-mauve.

**LUCELLE MATHIEU DE LA DRÔME (Reydellet).**—This promises to be a useful addition to the old florists' type of incurved varieties. It is large and deeply built, the florets narrow and regularly incurving; colour pale golden yellow.

**MME. FERLAT (Calvat).**—A grand massive Japanese incurved; the florets are heavily grooved, the colour pure white.

**MME. LAURENCE ZÉDE (Calvat).**—Another big globular Japanese incurved, with grooved, pointed florets of medium width; inside colour violet-amaranth, reverse silvery pink.

**WERTHER (Calvat).**—Globular Japanese of large size, having grooved incurving florets; colour rich deep rosy amaranth, reverse silvery. A fine effective novelty.

**VICOMTE ROGER DE CHEZELLES (Calvat).**—Wrongly described in most reports as Vicomtesse. A very large Japanese, the centre florets incurving and closely resembling Mr. Briseoe-Ironside's seedling Arona; colour golden yellow bronze, reverse silvery yellow.

**MME. PH. RIVOIRE.**—This is a Japanese, also of great size; florets very broad and ribbed on the reverse; colour pure white.

**MILLE. LUCIE FAURE (Calvat).**—A fine novelty of the Japanese incurved type, the florets of great length, good substance, and deeply grooved; colour pure white. It will probably rank as one of Calvat's best.

**PRINCESSE DE GALLES (Calvat).**—Japanese, with very long florets, which are grooved and of medium width; colour pale pink shaded yellow, tinted purple.

**TOPAZE ORIENTALE (Calvat).**—A solid, compact incurving Japanese, very globular and regular in form; florets grooved and broad; colour pale lemon yellow.

**M. G. CHARANNE (Calvat).**—A closely built Japanese incurved, with rather broad florets; colour rich golden yellow.

**SOUVENIR DE MOLINES (Calvat).**—Japanese, close and compact in build; golden carmine bronze, reverse golden.

**LECADIE GENTILS (Quétier).**—A sport from *Enfant des deux Mondes* raised in France last year; it has narrow grooved florets, the blooms are of large size, and the colour pale pure lemon yellow. Very hairy.

**SOUVENIR DE MME. F. ROSETTE (Calvat).**—A big solid Japanese incurved, with good florets pointed at the tips; colour plum coloured amaranth, with silvery amaranth reverse.

**M. HUGUIER (Reydellet).**—A very large Japanese, but rather flat in build; florets incurving, of good substance, and grooved; colour pale rosy mauve, reverse silvery pink.

**PAPA VILLARD (Nonin).**—Japanese, of good size, but not overlarge; the florets are rather broad, curling at the tips; colour very deep rosy mauve with silvery reverse.

**MME. DESBLANC (Reydellet).**—An incurved Japanese, with twisted intermingling grooved florets of medium width. A pretty shade of bright rosy pink.

**MILLE. LOUISE BROSSILLON.**—This, too, is a Japanese incurved of very large size; it has medium-sized grooved florets that are twisted. It is said to be a seedling from Mme. Carnot, and its colour is a pure white, very slightly tinted.

**DON PIETRO BARAGIOLA (Reydellet).**—Japanese, with narrow, flat, reflexing florets, not large, but very striking and distinct; the colour is deep golden yellow, shaded rosy carmine.

**MME. G. BRUANT (Calvat).**—A monster Japanese, with very long, drooping florets; colour pale rose shaded purple towards the tips, centre almost white.

**SOLEIL D'OCTOBRE (Calvat).**—A rather early blooming Japanese, with medium-sized drooping florets, curling at the tips; colour a pretty shade of pale lemon yellow, reverse silvery.

**MME. ED. ROGER (Calvat).**—Japanese incurved; florets of medium width and grooved, large solid globular-shaped blooms. This is a most distinct novelty, being of a pale but decided sea-green colour, which in its early stages is very effective.

**N.C.S. JUBILEE (Calvat).**—Another very fine globular Japanese incurved variety; the florets are broad and grooved; colour pale lavender pink, with silvery pink reverse. A noteworthy acquisition in its section.

**M. MASSANGE DE LOUVREX (Calvat).**—Also of the Japanese incurved type; florets of medium width; colour a very fine clear shade of pale yellow.

C. HARMAN-PAYNE.

**New incurved varieties.**—The 1897 novelties do not appear to contain a large percentage of this old type, and, indeed, after recent decisions it appears somewhat difficult to decide what an incurved Chrysanthemum really is. But, following the example set by the National Chrysanthemum Society's classification committee and using the term in its fullest possible sense, the following seem to me to be the most promising of recent novelties in the incurved section: *Rena Dula*, small in size, florets sharply pointed, colour deep rose, tipped white; *Chrysanthémiste Bruant*, very massive and compact, very regular florets, colour deep golden bronze; *M. Desblanc*, deep reddish rosy bronze, reverse golden bronze; *Général Mauric*, small, but very regular, colour deep yellow in the centre, outer florets pink; *Emile Nonin*, deep rich golden chestnut, very regular; *Lady Isabel*, a fine bold, deeply-built flower of great promise, the florets substantial and the colour a charming shade of silvery blush;

*Triomphe d'Eve*, narrow white florets; *Lady Gormanston*, white; and *Lucille Mathieu de la Drôme*, large, globular, pale golden yellow, with narrow florets.

**New Chrysanthemums.**—We are now getting such an overwhelming number of new varieties, all of which are supposed to possess some merit, that it is very difficult to make a selection and keep within reasonable bounds with regard to numbers. I find last season there were upwards of fifty varieties which received either first-class certificates or awards of merit, and this season already there are a number which have received the same distinctions. Now, although this has been going on for years, yet many of the old varieties will still be found in the best stands of exhibition blooms. I think *Modesto* is likely to become a general favourite, being of free growth, and the large, full, deep golden-yellow blooms may be distinguished at a distance among all other yellows. *Western King* is another which will require something good to beat it; the large pure white flowers are of remarkable substance and it appears to be one of the best to manage—H.

#### SOME NEW CHRYSANTHEMUMS.

FOLLOWING the precedent of previous years, append a list of the best of the novelties of the season seen up to the date of writing these notes with the exception of Continental novelties, which form the subject of a separate paper. A large proportion of novelties of somewhat older date are in good form everywhere, and of these, *Edit Tabor*, *Mrs. C. Bliok*, *Australie*, *Pride of Macford*, *Oceana*, *Emily Silsbury*, *Mutual Friend*, *Mrs. H. Weeks*, and many others referred to in former notes justify the good opinion that we then formed of them. The most interesting of the English and American varieties for the present season from the exhibition standpoint appear to be:—

**MRS. P. R. DUNN.**—A very fine large Japanese Anemone variety with flat guard florets and distinctly tinted yellow.

**MABEL MILLER.**—Of the same type as the preceding, guard florets creamy white and flat form, blooms large, with large yellow disc.

**MRS. CATERER.**—Also a Japanese Anemone with long drooping guard florets; colour pure white.

**LADY HANHAM.**—A really fine and attractive sport from *Vivian Morel*, which it resembles very closely in build. In colour it varies, but may be described as of a pale creamy salmon shaded rosy bronze. A very fine addition.

**MRS. HERMANN KLOSS.**—A large-sized Japanese with long spreading florets; colour a very rich shade of warm golden terra-cotta, tipped gold.

**MRS. G. W. PALMER.**—A sport from the well known exhibition variety *Mrs. C. Harman-Payne* and probably identical with the French novel *Mme. Eugene Testout*, which had the same origin and closely resembles *Mrs. G. W. Palmer*. The colour is a deep rosy bronze, but in other respects it does not differ from its parent.

**WHITE SWAN.**—A very large Japanese with long tubulated florets; colour pure white, faintly tinted in the centre, very hairy.

**MABEL KERSLAKE.**—A fine sport from the Australian novelty *Pride of Madford*. The inside colour is a deep rich velvety crimson, reverse golden.

**MRS. S. C. PROBIN.**—Japanese incurved; florets grooved and pointed; colour pure white shading off to pale rose.

**LADY RIDGWAY.**—An immense Japanese incurved with deeply grooved florets of good width; colour reddish-bronze, reverse salmon-buff tipped gold.

**LADY ISABEL** will probably be classed with the old type of incurved although its great size seems to indicate Japanese parentage. It is deep build, the florets very regularly arranged and fine form; colour silvery blush.

**GEORGINA PITCHER.**—Japanese incurved; very large and globular, florets deeply grooved and

ory broad. A fine massive-looking variety; colour pale canary-yellow, reverse silvery yellow.

**MARJORY KINDER.**—An incurving Japanese of large size and evidently a Londoner's variety, being exhibited in fine form at Southwark Park; colour rich dazzling golden-yellow, solid, compact forms.

**PRIDE OF RYEHOFF.**—Niveum, from which this a sport, was justly held in high esteem. Pride of Ryeoff is pale sulphur-yellow, deepening towards the centre. In form and build it resembles its parent.

**MRS. COTESWORTH BOND.**—Japanese, with long drooping florets, curly at the tips; colour a very delicate shade of pale pink.

**WESTERN KING.**—This American novelty was seen last year. It is a fine compact Japanese curved with a splendid grooved floret, and the colour, a pure waxy white, is very fine. This is the variety is good wherever it has been seen.

**G. J. WARREN.**—A grand sport from the famous Mme. Carnot and worthy of its parent, which it closely resembles in form, but varies in colour, which is a very pure pale shade of yellow. It will be certain to become a favourite with the exhibitors.

**SUNSTONE.**—A fine globular and incurving panicle; colour a fine shade of apricot-yellow.

**SIMPLICITY.**—This, like the preceding one, is of American origin. It belongs to the Japanese section, and has very long drooping florets; colour beautiful clear snowy white.

C. HARMAN-PAYNE.

#### PROSPECTS OF THE SEASON.

As far as the Chrysanthemum is concerned there has not been much to grumble about in regard to the weather during the past season, although in a few districts the frosts of late May did some damage. The young plants, which were then standing in the open air, were tender, and consequently the tips of the growths became weakened, which, of course, gave so severe a check that in those cases the effects are visible now, at flowering time. The Chrysanthemum does not require a forced growth, but progress must be steady and unchecked from the beginning to obtain the best results in the way of blooms. I am sure that too many coddle the young plants induly, and in that way lay a poor foundation to their growth. This coddling is perhaps a secondary mistake to over-growing the popular tumbling flower. Among all collections I inspect, whether an amateur's with a few dozen plants or where the champion blooms usually come from, it is curious to note the difference of treatment that exists. In some instances feeding the plants with strong liquid and other manures, it is easy to see, has been a leading feature, and when the sired crop of splendid, highly-developed flowers would be seasonable, such cultivators are disappointed to find they are not forthcoming. Several examples of over-growth have been noted this autumn. Securing early buds, again, is a fruitful source of failure. This mistake, in the same way as over-feeding, only exhibits its bad effects in a collapse at flowering time. The buds push out of the foliage on long peduncles; they appear to be swelling so kindly that the growers may well expect a rich harvest. All goes well until the florets begin to show colour, then perhaps a row or two will run out at great length, but the buds absolutely refuse to go further. There are many, dear, who have been delighted with their huge buds of Mme. Carnot, Australian Gold, Reine Angletterre, to mention a few, who are not over-anguine now. Early buds, too, produce in so many varieties blossoms of bad colour. The Vivand Morel, Charles Davis, and such monster flowers as Mrs. C. H. Payne, develop shades of washed-out tints, and are anything but pleasing. The weather has been favourable to good results. This is especially so now, as the blooms are opening. Except for an occasional visit of frogs the elements have for the past few weeks been fine. We have had but little rain since the Chrysanthe-

mum plants were placed under glass, nor has the air been cold. It has, therefore, required quite a small amount of fire-heat to assist the opening blooms, and, where growth of a medium strength obtains, flowers are developing exceptional substance. I fully expect to find the exhibitions quite up to the average of other years. Of course the finer displays are made with the Japanese flowers. Incurved Chrysanthemums do not seem particularly fine. One rarely meets, for instance, with nice blooms of the Queen type, which a few years back were the ideal flowers in that class. A new type is springing up in such varieties as Chas. H. Curtis, Mrs. R. C. Kingston and Duchess of Fife. These are, indeed, noble examples when well grown, neither are they difficult to grow. I should say the only way of keeping the incurved class from falling out of cultivation is the introduction of sorts as good as those named, in other colours.

The hairy-petalled kinds do not appear to gain in favour, as, with the exception of one called Hairy Wonder, they are not frequently seen. Single-flowered kinds are exceptionally pretty and useful for cutting, but the still way of exhibiting them, tied to wires, does not enhance their beauty. The type of which Framfield Beauty is an example appears likely to be esteemed. This produces long petals of a rich colour, that hang down in an informal manner. New varieties of Chrysanthemums are as numerous this year as ever, but it is rather early to judge of them. So far Ella Curtis and Robert Powell are very fine. They both partake of a bronzy yellow character and are of English origin. Those obtained from a plant "sporting" are in two instances very fine. I mean G. J. Warren (a lemon-yellow facsimile of that grand white Mme. Carnot) and Lady Hanham (a charming shade of salmon-rose, in shape similar to Vivand Morel, the parent plant). It is certain, too, that among the new kinds of M. Calvat's noted strain several most beautiful sorts will be seen before the season is past. At present N.C.S. Jubilee, Mlle. Lucie Faure, Mme. Edmond Roger and Mme. G. Bruant appear to be novelties of the first order. In a new Australian variety called Master H. Tucker there appears to be something exceptionally good as regards colour—a dark crimson; and as the growth is also sturdy, I note this as one of the best of the year.

H. S.

#### SHORT NOTES.—CHRYSANTHEMUMS.

**Chrysanthemum Mrs. Caterer** is a Japanese variety with pretty pure white flowers of good build, the guard florets long and drooping.

**Chrysanthemum Pride of Ryeoff.**—Those who know the very chaste American variety Niveum will welcome this novelty, which is a very pale primrose or sulphur-yellow sport from it.

**Chrysanthemum Trafalgar.**—A charming little Japanese pompon, if the term is permissible. For cutting it will be very useful where a deep rich velvety crimson-maroon shade is required.

**Chrysanthemum Georgiana Pitcher.**—This is a very large and compact Japanese, with deeply grooved florets of good width. The colour is rather pale canary-yellow, the reverse a silvery shining yellow.

**Chrysanthemum J. B. Yvon.**—A sport from Vivand Morel and fixed in France. Although duller in tone and different from Lady Hanham, it seems likely when aged to be scarcely wise to stage it in the same collection.

**Chrysanthemum Maurice Boissard.**—A fine hairy novelty of the Japanese incurved form. The florets are medium in width and deeply grooved, pointed at the tips. The blooms are of good size, the colour pale golden yellow.

**Chrysanthemum Mrs. C. Harman-Payne** has given several sports, but two of them appear to be identical. Mrs. G. W. Palmer and Mme. Eugène Testout are both rosy bronze, but the third, called Mme. Louis Rémy, is a pure white counterpart.

**Chrysanthemum Lady Ridgway.**—This sort bears very large blooms, which are of incurved form. The petals are of great substance. Its buff-tinted flowers are very distinct, and either for exhibition or

for conservatory decoration it can be recommended.—H.

**Chrysanthemum Mrs. S. C. Probin** is an American variety of very great beauty. The shade of flesh-pink is delicate and pleasing. It has large blooms that are inclined to be round in shape and of extra substance. The habit of the plant is dwarf and sturdy.—S.

**Chrysanthemum Lady Isabel.**—This is a charming variety belonging to the old incurved type although somewhat larger and deeper in build than many of that section. The form is excellent. The florets are rather broad and incurve very perfectly; colour, pale silvery bluish.

**Chrysanthemum Ella Curtis.**—Some fine flowers of this new variety are opening. It is not unlike the old Boule d'Or in its long and wide drooping florets. It may be called an improvement on that uncertain kind in every way. As an exhibition bloom it is quite one of the best of the season.—H.

**Chrysanthemum Don Pietro Baragiola.**—This novelty was raised by M. de Keydellet. It is a Japanese with narrow, flat, reflexing florets. The colour is deep golden yellow, shaded rosy carmine. Although not over-large, it is a very striking and effective novelty, and quite free from coarseness.

**Chrysanthemum Mme. Ferlat.**—One of Calvat's 1897 novelties. It is a very large, globular Japanese, solid and compact in build, florets grooved and incurving, pure white in colour. It was staged in good form at the Paris show last year, but appears to even greater advantage in England this season.

**Chrysanthemum Dorothy Seward.**—I am not at all pleased with this variety. The colour, a deep terra cotta shade, is nice, but the florets are short, and this gives the bloom a close appearance the reverse of graceful. It is uncertain, too, and late-formed buds are giving quite single blossoms.—S.

**Chrysanthemum Mme. Philippe Rivoire.**—This variety obtained a certificate recently, but, considering that it has been in cultivation several years, that honour is somewhat late. It is, however, a very good white flower and especially easy to grow. The blooms are full and deep, the florets have first-rate substance, and it is altogether a desirable kind.—H.

## TREES AND SHRUBS.

### NOTES ON TREE LIFE.

THE difference in the vitality of trees, especially in the characteristics in connection with their decay, is very marked. This would seem to be considerably influenced by different soils. Any observations on such subjects are always the more interesting when one can settle within a few years the date of the planting of such trees, and so form a tolerably correct estimate as to their longevity under different conditions, or, in the case of healthy trees, determine the annual progress made both in matter of height and bulk. The knowledge, for instance, that the pleasure grounds here were planted by Lord Clive in or about the year 1760 enables one to say with certainty that the limit of life of the Silver Fir on this soil is 130 years. Not one of the trees is in good health, and many have already been removed. They die hard, grand old specimens nearly 120 feet high, the majority of the branches dead or dying, and yet the tree as a whole fine in its decay. It seems almost a pity to anticipate their fall, were it not that if allowed to come down naturally they are apt to smash into and destroy young trees that have been planted to replace them. Surrey is famous for the number of its Beeches and the lovely autumnal tints they assume. The tree does well here and assumes large proportions; it grows quickly, but is not long-lived, and once it begins to go the decay is very rapid. The first symptoms of decay are an early leaf shedding, some three weeks before the healthy trees. The next season's foliage is small and scanty, and by the end of that season the tree is dead. The Elder goes even more quickly; after showing

a deterioration in the foliage early in the year, it is bare and dead before that year is out. *Apropos* of this tree, there is an instance of reproduction in a colony of young trees produced from seed that must have blown across the lake. From the age standpoint, not the least interesting is the contemplation of the various clumps of Yews that are scattered here and there, and a comparison between their size after 140 years' growth and that of the monarchs one meets with in old churchyards gives a better idea as to the wonderful age of the last-named. It is possibly the knowledge of the slow growth of the Yew, and that several generations must come and go before the tree is seen at its best, that are accountable for the few that are planted. It should, however, be remembered that in certain situations it is one of the finest trees we have, and where those situations exist and there is a probability of their continuance, no one should hesitate to plant, sparingly of course, the sombre character of the tree not warranting grouping on a large scale. I watch with each succeeding year the appearance of our only specimen of the Sugar Maple. It is a large tree and well furnished, but Mistletoe has obtained a firm and ever-increasing hold upon it, and if the theory is true that the longevity of trees is considerably shortened by the parasite, then the days of the Maple are numbered. Starting at the top with pieces doubtless at first unnoticed, but which have now attained large dimensions, it is spreading all over the trees. In connection with the destructive influence of the Mistletoe it would seem that it applies to some species and not to others. Of respectively Lombardy Poplars and Thorns, for instance, that were carrying fifteen years ago quantities of Mistletoe, and all apparently in the best of health, the Poplars are dead, but the Thorns none the worse. It may be the parasite had nothing to do with the death of the former, I simply give the result of observation. Can any cause be assigned for early collapse of the greater part of the foliage of the common Plane? The trees are apparently in the best of health, they break well, and the leaves up to the time of attaining their full size are fresh and vigorous; then there is a shrivelling of the leaf-stalk, a premature browning of the leaf, and down they come in shoals. This applies solely to the large-leaved or common Plane; I have never noticed it in the cut-leaved variety. Reverting again briefly to evergreen trees, I noticed a paragraph lately on *Taxodium semper-virens*, so far as its value as a timber tree is concerned. Given sites and soil where it does well, would it not be advisable to plant it rather largely in this country? I am aware that in some pinetums it is not at all ornamental, presenting a ragged, rusty appearance, and as though its leader had received one or two very severe checks; but on the other hand there are places where it is close on 100 feet high, and bearing in mind the fact that the tree was introduced so late as 1843, it is certain that these last have done their work very quickly, and would not in this respect suffer in comparison with the most rapid growers of the coniferæ. The comparatively new *Abies brachyphylla* is another fast-growing tree; one, some 4 feet in height when planted here thirteen years ago, is now 24 feet high. I think it is one of the handsomest of its class. E. BURRELL.

Claremont.

**Vitis Coignetæ.**—At the recent meeting of the Royal Horticultural Society at the Drill Hall the Messrs. Veitch had some capital examples of this distinct looking Vine. The plants were grown to a single stem and nearly 10 feet high,

the large, handsome foliage, somewhat woolly in character, being very showy. Of quite another character was the smaller kind, *V. vinifera purpurea*, of which there were also several plants with finely-coloured and beautiful, though much smaller, leaves, and both are welcome if rightly placed in the garden and quite distinct.

**Leycesteria formosa.**—This shrub does not always flower so freely as desirable, but when it does the effect of the nearly pure white flowers, the dark crimson bracts and seed vessels, and the deep green foliage is very pretty. It usually produces a few flowers in any position, but to flower it freely, a nice warm sunny position and fairly good soil are necessary. It is an easily-propagated plant, growing freely from cuttings in a hand-light. They may be dibbled into pots or a bed made up for them, and when they are rooted and planted out in light, rich soil, progress is very rapid.

**Ulex nanus.**—The dwarf Furze must certainly have a place in any selection of autumn-flowering shrubs, as its bright golden blossoms are very freely borne at this season of the year,



*Rosa rugosa calocarpa.*

and a group of it is just now particularly striking. Later on the common Furze and its double-flowered variety will commence to bloom, but at present the field is held by the dwarf variety alone. It is readily increased by cuttings, or shoots may be layered, which, from the habit of the plant, is an easy matter. When planted in a bed the branches may be layered and allowed to remain so, and the shoots then pushed up will form quite a mass, and when in flower make a goodly show.—T.

#### SHORT NOTES.—TREES AND SHRUBS.

**Blue Hydrangeas.**—In "A. D.'s" note on the above (p. 310), he remarks that the blue colour is usually found in the flowers of plants growing in boggy or black soils. This is not invariably the case, as the hue is often present on plants growing in the red soil of South Devon.—S. W. F.

**Cotoneaster horizontalis.**—This well-known plant, with its neat, almost dense habit of growth, is

well suited for covering a large piece of rock, and with a sunny aspect so much the better. A good depth of soil for its roots will not be without its ward in the season of growth. At the Drill Hall recently Messrs. Paul and Son had some fine plants of this freely covered with bright berries.

## GARDEN FLORA.

### PLATE 1144.

#### WILD ROSES.

(WITH A COLOURED PLATE OF *ROSA CALOCARPA* AND *R. HUMILIS RUGOSA*.)

SOME of our Rose-growing nurserymen have awakened to the fact that some wild Roses are worth growing, and even at flower show a number of them have been seen; they do not, however, appear to advantage in show. But on cool grass in the hot summer days

there is nothing that is more delightful whether they be those of our own count like the Sweet Brier, Dog and field Roses or those of other countries, such as the beautiful Altai, the American swan Rose, gallica and many others. Soon we hope to be able to get many of them easily in nurseries as any other Roses, and if our trade Rose growers would only get out of their narrow way of offering plants singly at needlessly high prices we might yet see effective groups of wild Roses. But they should be sold by dozens, and Sweet Brier and Dog Rose which could be used as covert, should be offered by the thousand. As to growing wild Roses, the best way is not to plant them in the garden itself, but rather on grass walks or rough banks, or in new-made hedgerows. One of the prettiest ways we have seen was a border of them in a grass orchard of young trees, with groups of wild Roses on either side of a grass walk between; and beyond meowing once or twice, no other care was given, as wild Roses are able to look after themselves. If their beautiful bloom does not last long, the fruit is pretty, and though they are not of the things that please us well for garden cultivation, as the best garden Roses, the wild Roses may often be used with fine effect.

Among the wild Roses that give us most pleasure there may be named the Needle Rose of Japan (*R. acicularis*); the field Rose or the Dog Rose, which generally represent themselves in our hedgerows pretty freely, and therefore generally need no planting; the Carolina Rose, charming for its distinctive way of blooming and very late flowers, excellent also for the house for cutting; the alpine Rose and its Pyrenean variety, excellent for rocky banks; the Cherokee or the Indian Rose, tender away from protection, as all single Roses should be hardy; the glossy Rose (*R. lucida*), one of the most excellent and free we have, blooming, like the Carolina, late in the year, and growing

\* Drawn for THE GARDEN by H. G. Moore, Gravetye Manor. Lithographed and printed by J. Goffart.



ROSA CALOCARPA 2 R. HUMILIS RUBOSA



marshy or almost any ground, pretty in flower too in winter; the Austrian Brier, a native of Central Europe, and hardly even among wild Roses, although we are accustomed to treat it as a garden plant; the Musk Rose and its forms, all handsome Roses, and also the many-flowered Rose (*R. multi-loba*), and, second to none, our own sweet briar and the Japanese Roses (*R. rugosa*). The Scotch Rose also is pretty, and has long been represented in many gardens by its noble forms. One of the most beautiful of its single forms is the Altai Rose, a large, soft lemon-coloured flower. The creeping Rose of China and Japan (*R. Wichuriana*) is quite distinct from any, and excellent for running about rocky banks and as a climber. These probably are but a small number of the Roses with which the northern and mountain

colours are, we think, in a mass as beautiful as any, as, for instance, the Oak woods of Sussex and Beech in Surrey and Bucks. At present there is scarcely a hardy summer-leaving tree of Europe or America that is not beautiful in colour, though that colour varies much according to the soil and other conditions. For instance, the Aspens, so pale in colour in Sussex and in Ireland, on the limestone have sometimes the most brilliant of fine colours. One tree we have noticed lately is very handsome—namely, the Tupelo tree (*Nyssa*), which is not a European tree, however.—Ed.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**PEAS.**—In favoured localities and sheltered gardens a sowing of some dwarf early Pea may be made during the present month with a view to having a few gatherings somewhat earlier than is obtained by sowing at the latter end of January.

**BROAD BEANS.**—These being somewhat hardier than the Peas, there is less risk in autumn sowing, and a few rows should certainly be put in now on a warm border. If such ground is scarce just now the rows may be made closer together, and if all goes well with them the plants in every other row may be transplanted in the spring. A few dishes of these early in June are considered a delicacy, and well repay for any trouble incurred during the winter in affording a slight protection. Early Mazagan is recommended for present sowing, as it possesses a hardy constitution, is of dwarf habit, and turns in early. Beck's Dwarf Green Gem is of recent introduction compared with the former, and is recommended as being prolific, early, of dwarf and compact habit, and worthy of a trial for present planting. Beans do not require the same attention as Peas, as birds do not attack them, but it would be wise to coat the seed in the same way as recommended above to secure even rows of plants.

**TURNSIPS.**—If by chance some of the more tender varieties have been sown and any doubt exists as to their hardiness, it would be wise probably to get them off the ground before we get any severe frost. The roots will keep for a long time in good condition if not exposed. They may be stacked against a north wall and covered with bracken or straw. This entails very little trouble, and it is convenient to get the roots as they are required. The main late sowings of Chirk Castle are sufficiently hardy to stand the most severe winter; therefore they should be allowed to remain undisturbed, as their quality is never better than when used direct from the ground.

**LEEKS.**—These will be in greater demand now the summer vegetables are over. If the plants have not been moulded up as recommended, it is not too late to draw some soil round the stems 6 inches or more in depth. Where they were not planted in trenches the same as Celery it will be necessary to loosen the soil on either side of the rows, but not too close to the roots, to get the soil in a suitable condition for the purpose. Before doing so, however, a good soaking of liquid manure will prove of great assistance, as perhaps no other crop absorbs more moisture and nutriment out of the ground than this one, and after such a dry autumn the soil about the roots will contain very little moisture.

**TOMATOES.**—The past month has been very favourable for these plants, bright sun with abundance of air causing them to make short-jointed, firm growth, while the flowers have opened strongly and set freely. The earliest fruit will be changing colour, and though it is necessary, to obtain these of the best flavour, to allow them to remain on the plants until they become well coloured, they should be gathered directly they reach that stage to encourage later fruit to develop. Continue to surface-dress the roots piecemeal, using rich loam and some plant food, which is more lasting and of greater benefit to the plant during the winter than soaking the soil with liquid manure, or top-dressing the plants with several inches of decayed manure. Keep the plants free of superfluous growth by pinching out crowded shoots; when these are allowed to develop the knife has to be used, and the sudden removal of a large quantity of foliage gives the plants a check. Give fresh air on all favourable occasions, and keep sufficient warmth in the pipes to expel moisture. On no account should the plants be syringed, neither should the floors, &c., be damped, as moisture in this way is often the forerunner of disease.

**BRUSSELS SPROUTS.**—Like other winter crops this season, these have done remarkably well, and promise to give a good supply over a long season. Care is necessary in gathering these to see that the right sprouts are used if the plants are to remain productive as long as possible. It is not uncommon for the daily supply to be obtained from one or two plants which happen to come first, resulting in some being



*Rosa rugosa.*

world is clothed, and of which many have yet come to our gardens.

**Autumn tints.**—I am constantly hoping to see an article in your columns on autumn-tinted trees and shrubs. Of course, if one lives near the water the matter is simple. You can go there week after week and note the tints you like best. But if you do not live near an arboretum you have not so good a chance. The trees in a nursery are generally too young to show their real effect. I have about 50 acres available for planting. I propose to use them principally with a view to autumn tints. I am, unfortunately, on a hillside facing west, near the sea, so I shall not be able to attract as well as the lucky people in the midlands; but with adequate shelter belts something may be done. I should, therefore, greatly appreciate an article by some specialist on hardy trees and shrubs which take beautiful autumn tints.—K.

No doubt it is interesting to find out the names of trees and shrubs that have brilliantly coloured leaves in autumn, but it is to a lover of autumn tints almost an academical inquiry. Of late, in this country around London the difficulty is to find a tree that has not beauty of colour. Even the most common trees that are never noted for their

For this purpose either of the following varieties may be selected, as they are of good constitution and naturally dwarf and early: Chelsea Gem, Early Sunrise, William Hurst, and Ringleader. A warm, well-drained soil is necessary, such as a south border, where they can get all the sun possible during the winter with the protection from cutting winds which the wall affords. The seed should be put in at once while the ground is still warm. This will cause it to germinate quickly, which is very essential, as when it remains in a dormant state for any length of time at this season, many of the seeds decay, and thin rows result. As a further protection against this the seed should be coated with red lead, which also preserves it to a great extent from birds and mice. Constant attention will be necessary to protect the plants during the winter. Wire guards are best to ward off birds, and frequent dustings of fine dry ashes to preserve them from slugs. Broad shallow drills should be formed and the seed sown evenly, it being better to draw a little soil round the plants as they push through than to bury the seed too deeply at first. Should, however, the plants fail to stand through the winter, the loss of seed and labour are not great, and the ground is available for sowing again towards spring.

quite small and barely fit for table, while others are past their best and are loose and open. These are not satisfactory when sent to table, and lead to a certain amount of waste. Looking the plantation over carefully and gathering the sprouts when they have reached the desired size will save this, and their season will be prolonged. The heads of the plants should be retained as long as possible; the early removal of these causes the sprouts to develop more quickly and thus shortens their season.

**BEEFROOT.**—Owing to the absence of frost the roots in most gardens are still in the ground, which is an advantage, as the quality is not likely to suffer as when early lifting and storing are resorted to. The roots are not so tender as many suppose, and I would advise those who have always made a practice of lifting the crop to leave a portion at least in the ground. If every other row was carefully lifted and some soil drawn well round these roots that are left, I do not think many will be found decayed in spring unless the winter proves exceptionally severe.

**RHUBARB.**—Those who can afford to lift a few roots of Royal Albert or some other early variety and can command a gentle warmth, either from a bed of leaves or a warm greenhouse, will find little trouble in having Rhubarb ready for use within a few weeks. The simplest plan is to lift a few clumps with soil about them and pack them in a deep box. They can be easily placed under the stage in a warm house, but not too near the hot-water pipes. It is better to exclude light, which is done by covering the box with old sacks. Clumps may also be placed in the Mushroom house or a warm cellar, or, failing either of these, a hot-bed of leaves and manure about a yard deep should be formed, the clumps placed on this and covered with cement barrels or boxes. A gentle warmth excites growth so long as plenty of litter is placed round and over the covering. The old stools should not be destroyed when they are done with, but split up in the spring to form new plantations.

RICHARD PARKER.

#### FRUIT HOUSES.

**PINES.**—With the exception of fruiters, Pines will now be resting, especially successional plants required for starting in the ensuing and two following months. Most growers defer starting these until the turn of the year, but when fruits of the Queen variety are required in the early spring months, there is no alternative but to start a batch of plants early in December. It is essential that the plants have as long a period of rest as it is possible to afford them. With this end in view, the bottom-heat should not exceed 70°, while a temperature of 60° and 65° will suffice for night and by day. If growing in pits, damping down should be entirely dispensed with, but if in lean-to or span-roofed houses, a slight sprinkling of the paths will be beneficial on bright days, and a little air may be admitted during the forenoon to prevent the temperature rising too high. If the plants are plunged in a bed of tan or leaves they will require but little water, but at the same time they must not be allowed to become dusty, as this will mean loss of roots. It sometimes happens that a few of these plants start to throw up fruit just when they are being got to rest. This in some instances is far from being an evil, as these fruits will ripen at a time when variety for the dessert is very limited. Such plants should be removed to the fruiting house at once. The next batch of plants intended to form a succession to the above need not be kept quite so dry at the roots, but the soil should never approach more than a medium state of moisture at the most. If these are in a separate pit or division, treat them as regards temperature, &c., as recommended above. Suckers potted up as advised in the latter part of September will be sufficiently rooted for the temperatures to be lowered to the above figures, but if those which were shifted at that time into 7-inch and 8-inch

pots are not yet sufficiently rooted to be got to rest, continue former treatment for a week or two longer. Fruiters must have a brisk day temperature of 80°, and from 70° to 75° at night, according to outside conditions. See that they get sufficient root moisture with accompanying stimulants, especially those plants carrying fruits which are rapidly approaching maturity. Sprinkle the floors and the surface of the beds with a fine-rosed water-pot several times a day, but for the next few weeks dispense with the use of the syringe. As a set-off against this, keep the vapour troughs constantly charged, and strew a little guano in them every few days. To economise fire-heat, cover at night with blinds, dressed covers, or mats. There are disadvantages attending the use of covers unless the precaution is taken to shut off part of the heat when these blinds are let down or mats put on. Between now and the end of the year a good supply of Oak leaves should when possible be collected and put by in some out-of-the-way place for future use. Failing Oak leaves, Beech or Spanish Chestnut are the next best, but if these are not obtainable, it is better to use tan for Pine growing. The latter is best bought in some little time before it is wanted, so that rank gases may be dispelled in the process of fermentation previous to placing it in the plunging beds. If there is a likelihood of the house in which the first lot of Queens is to be started being at liberty, give the structure a thorough cleaning.

**CHERRIES.**—In many places where very early Cherries are in demand it is the practice to house the trees early in November and to bring them on gradually by the aid of fermenting material alone until the buds are in a forward state. When leaves are not obtainable, fire-heat has to be relied on to give the necessary warmth, but of this little or none will be required in the initial stages so long as the weather remains fine and open. In the event of frosty weather setting in, a day temperature of 45° will suffice and 5° less than this will be quite high enough for the night. When the buds begin to show signs of moving, a rise of 3° more both by day and night may then be allowed. If the soil about the roots is in a dry condition, give it a soaking of tepid water, but do not water it if in a medium state of moisture, as it should be if the trees have been standing outside. If the trees are planted out in an inside border, test the latter and afford water in sufficient quantity to moisten it throughout if found necessary. In this case I am assuming that such matters as house cleaning, lime-washing of walls, and dressing of the trees with an insecticide afterwards, also the training and tying of the trees to the trellis, have had attention. If the border has not yet been top-dressed, get it done when closing the house for starting. Remove as much of the inert surface soil as can be done with safety and replace it with fibrous loam with which has been mixed a little lime rubble or old plaster and some bone-meal. This should be spread evenly and be firmly trodden afterwards. Houses containing planted-out trees which will be started early in the new year must in the meantime be kept fully ventilated, and see that the borders do not become too dry. As opportunity offers, get the trees pruned and retied to the trellis and the houses put in proper order. Trees in pots or tubs may, of course, remain outdoors until actual starting time arrives, but see that the litter, Braeken, or old hot-bed material is well mounded over and around them should frost succeed the present mild open weather.

**PEACH HOUSES.**—All the inside borders of houses in which the trees are now resting should be frequently tested to guard against their becoming over-dry. Alertness in this particular will in a great measure prevent the trees shedding their buds, as over-dryness of the border is more often than not the cause of this complaint. Proceed with the pruning, dressing, and tying of the trees as circumstances will permit, keeping a fair amount of work of this description in reserve should a change of weather cause a suspension of outdoor operations.

A. W.

## FERNS.

### HARDY EXOTIC FERNS FOR GROUPING.

SOME Ferns are much more suitable, because more effective, than others for the purpose under consideration. Among those most desirable are a number of exotic kinds as hardy, as in some instances hardier, than our native Ferns possessing characteristics and variety of foliage quite distinct from those of the British varieties. They should therefore be planted in the hard fernery along with our native kinds, and thus a more varied and interesting, as well as distinct, effect will be produced. North America furnishes us with a very handsome hard Maidenhair in

**ADIANTUM PEDATUM.**—This species is so hard that 30° of frost have failed to injure it in dormant condition. Owing probably to its being so hardy it commences to grow early in the spring and is then liable to injury from late frosts also from the cold east winds. If planted where it is protected from these injurious influences, and in the shade where it will not be burnt by hot sun there is no reason why as lovely a clump of this Fern should not be secured as any in its native wilds. It grows 2 feet in height, the stems being long and bearing spreading pale green beautiful foliage. If half-a-dozen or so plants are put in a clump they will be sufficient to produce a very pleasing effect.

**LASTREA GOLDIEANA** is another North American species, very pretty, bold and effective. Its fronds are each 2 feet to 2½ feet in length, the pinnae occupying about one-third of the frond in length, wavy, and of a striking metallic green of the shades, which give a peculiarly pleasing appearance thereto. It is of erect habit and is a good kind for the background.

**LASTREA MARGINALIS** is spreading in habit, the colour pale green, the fronds each 15 inches to 20 inches long, triangular in outline and quite distinct from those of any other hardy kind.

**ONOCLEA SENSIBILIS** requires a sheltered a shady position rather inclined to be damp, and forms one of the most beautiful objects in the hardy fernery. Each frond attains to a height of 2 feet to 2½ feet, the leafy portion is a lovely pale green, each pinna being almost exactly like an Oak leaf, the frond having the appearance of a number of these fastened by their bases to the stem. In America it is called "the sensitive Fern" owing to its susceptibility to injury by wind and sun, but, when protected from these, will form a mass of lovely foliage. It is extremely hardy and free in growth. The fertile fronds are very remarkable, as they grow about a foot or 15 inches high, the upper portion, 2 inch or 3 inches of the top of the frond, looking like a number of dark green beads secured to the stem. These are the receptacles of the spore cases, and remain standing erect on the plant long after the barren fronds have perished in the autumn. There are three very ornamental North American ferns, two of them totally distinct from the British Royal Fern, but equally hardy.

**OSMUNDA CINNAMOMEA** produces large barren fronds not unlike a male Fern, but more pointed at the apex and thicker in texture. The remarkable feature of this Fern, however, is its fertile fronds, which are produced in the centre of the plant, and stand perfectly erect. These fronds are very woolly and destitute of foliage, the upper portion consisting entirely of the spore cases and their receptacles. As these mature they take on a beautiful cinnamon colour. This characteristic has given rise to its specific name as well as its common name, the Cinnamon Fern. A clump of this very distinct and ornamental species forms a most attractive object in the outdoor fernery.

**O. CLAYTONIANA** is quite distinct from the preceding. Its fronds are much more blunt, as are the pinnae; the colour is a lovely pale green

quite a velvety appearance. The fertile are similar to the barren ones, only that of the pinna midway of the frond on each the stem, instead of being like the others, inverted into the spore-bearing portions, being contracted, and eventually becoming give an appearance to the frond which has the characteristic name of O. inter-

It is a very handsome Fern, and should be very hardy fernery.

*PYCNIDIUM GRACILE* resembles the British O. but the fronds are much lighter in texture and more graceful in habit. The young fronds often come up nicely tinted. This is another which should not be omitted from a collection of hardy Ferns.

*PHYSICUM MUNITUM* is a handsome dark species, bearing along the stem closely set, divided pinnae, serrated at the margins. The fronds are often 2½ feet to 3 feet long and 4 inches wide. It is a remarkably effective species and very hardy.

*SCITHOPTERIS PENNSYLVANICA* and *S. GERMANICA* are both commonly called the Ostrich-tail Fern and the Shuttlescock Fern, the former because of the very decided curl of the pinnae in process of development, and the latter because of the strikingly symmetrical habit of growth and the shuttlecock arrangement of the fronds. These ferns come, the first from North America and the other from many parts of Europe. They are very many considered to be the same species, differing slightly as the result of climate or position. They are, however, sufficiently distinct to constitute it desirable to have both in cultivation.

*Pennsylvanica* grows much larger, is of a darker green in colour, and appears to be hardier than the other. *S. germanica* is, however, the prettier in colour is a greyish green, the fronds numerous and more graceful. The fertile fronds of both are produced in the centre of the plant and are devoid of foliage, being solely spore-bearing, very peculiar in appearance. These last come to the plant months after the barren fronds have been away.

*STRÆA ATRATA* is a very hardy Japanese Fern, standing erect in habit, dark green, evergreen and effective.

*SREBOLDI*, another Japanese species, has broad, leathery fronds, distinct and desirable for contrast with the lighter foliaged kinds.

*LOMARIA ALPINA* is a perfectly hardy New Zealand species which grows in dense clumps, dwarf; fronds 4 inches or so in length, not unlike the British *Blechnum Spicant* in appearance. It spreads quickly, creeping over stones and rock-work, and forming quite a carpet of green foliage.

*LOMARIA* is a variety of *L. alpina*, with narrower fronds, which are more slender and prettily veined. The fertile fronds of both these *Lomarias* are totally distinct from the barren ones, being erect and the leafy portion rolled back to form a covering to the spore cases on the back of the frond.

*PHYSICUM ACROSTICHOIDES* is a North American species. It is evergreen, has fronds each 18 inches to 24 inches long; the upper fertile portion is contracted. This species is very distinct and forms a nice contrast when surrounded by other clumps of lighter coloured and more careful kinds.

Besides the preceding there are other exotic kinds which may be cultivated successfully in many parts of the country, but which are not sufficiently hardy for cultivation in some of the cooler and more exposed parts. The foregoing, however, are so hardy, that they may be planted with full reliance in their hardiness in any part of the kingdom. B.

**Shade and sun-loving Ferns.**—It is a mistake to consider all Ferns as plants requiring shade and moisture. There are, on the contrary, many which like full sunshine and bright light. With our outstanding *Cystopteris alpina* and *fragilis*, which grow in our walls as well in sun as in shade, there is the class of Ferns which actually requires sunshine. *Cheilanthes* from the Old World, as well

as those from the New, only do well in a sunny aspect. I have had experience of this for some years. I could not succeed at Geneva in cultivating *Cheilanthes odora*, *lanuginosa* and *vestita*. In spite of every care given to them, they suffered from general weakness, ending in decay. At last I one day saw *Woodsia hyperborea*, that delicate and fragile plant, in full sun along an alpine road in Italy, and an idea occurred to me; and on returning I planted all my *Cheilanthes* in sunshine on a south wall. The result was good, and I recommend the plan to Fern growers. But it was necessary also to change the soil in which these plants were cultivated, and I set them in soft porous mould composed of Sphagnum Moss, peat and sand; good drainage and frequent watering ensured an immediate and excellent result. That which proved satisfactory for *Cheilanthes* I then tried for *Woodsia hyperborea* and *ilvensis* (the treatment did not do for *W. obtusa*); then for *Scelopendrium hemionitis*, that pretty and curious Fern from the south so rarely met with in gardens, where it is considered difficult to grow. Then I subjected to the same treatment *Nothochlena Marantæ*; and this lovely Fern, which formerly did not do successfully with me, turned out marvellously well. It is, then, absolutely certain that many species of Ferns—examples could be multiplied—require sun and plenty of air—H. COREYON, in *Gardener's Chronicle*.

ROSE GARDEN.

STANDARD ROSE STOCKS.

THE traveller by road may now see men grubbing up Dog Rose sticks to use to graft fine and often delicate Roses on, the sticks in heaps beside the roads, rootless, and looking like crutches for cripples, which they are to be in another sense in a year or two, when dying Roses are to be seen supported by them in our gardens. Nurserymen buy them from the men who cull them in the hedgerows and copses and think them good enough to put Roses on. Everybody who has tried to get a Dog Rose out of the ground will know how deep running the roots are, and how difficult it is to get them up, and in their rootless state the wonder is that any of the plants live at all. Many die, but how can we expect such dried sticks to become living founts of energy for the Rose? Most wild Roses, unlike trees, do not send all their life through the same stem for years, but throw up fresh stems as the old ones wear out and die. It is by the merest chance that we get a healthy Rose from such a stock, and so we may see more than one reason why the Rose should die often when it is quite hardy. A great improvement on this way is grafting Roses low on the seedling Brier, which means young clean roots and vigour. When Roses are worked low on this stock they sometimes throw out roots above the union, and liberate themselves, so to say. Besides, the stock is young, and far more certain to endure some years than the dried, and often half dead, sticks of the wild Rose, on which not one in fifty Roses will ever attain to the size and dignity of a real Rose bush. It is as if we were foolish enough to put an acorn on the top of an old stub Oak and expect it to become a tree. And it is not only that we put our Roses on worn-out crutches, but we put them high in the air, so that the Rose, often of somewhat tender origin, is set in the best place for the frost to kill it, while Roses grafted on the root or on the collar of the seedling Brier will be quite safe with 2 inches of earth above them; so that if the frost kills the tops, as it often does even in Southern England and Ireland, it will not hurt the root, and the most delicate Tea Roses will spring up again vigorously after the hardest

winters and bloom as well as before. Vigorous Tea and Bengal Roses on their own roots are none the worse for being cut down in this way, though they are often thrown away by mistake because the tops are dead.—Field.

**Rose Gloire des Polyantha.**—Want a lovely gem this is for massing or for pots. Its pretty miniature deep pink flowers are produced in immense pyramids—really wonderful for such a diminutive plant. A hundred or more of this beautiful Rose would provide a fine mass of colour the best part of the summer and autumn. It should also be valuable for pots for conservatory embellishment. Nothing is more telling than this and kindred Roses when well grown and interspersed among fine-foliaged plants in the conservatory. They also come in very useful for room decoration. This Rose has been one of the most attractive in this unusual autumn, and there are only three or four others among the Hybrid Teas, such as *Camoens* and *Marquise de Salisbury*, that can really compete with this fine Polyantha variety for garden or park decoration.

**Colour in Mme. Falcot Rose.**—Herewith I send you some buds showing their very rich colour, running W. A. Richardson very close. The fact that from April to December flowers can be had every day places Mme. Falcot far ahead of W. A. Richardson. The plants are grown in a cool, airy, span-roofed house running north and south. About a dozen varieties of Teas are grown; amongst them are four large very old plants of Mme. Falcot, and from these I gather the richest coloured Roses. Young plants on their own roots or budded from these fail to give anything like the rich colouring of those sent. The plants have been budded on standards, and I know them to be above twenty years old. The border was entirely re-made two years ago, and this year the result has been beyond all expectations. These four plants have given us thousands of Roses in May and June, over 100 were taken every morning, and now I can gather on an average two dozen every morning with hundreds of buds to open. I have been trying for several years past to get the same colour into flowers on young plants, but have never been able. Is it the age that does it?—J. R.

**Chinese, Bengal or Monthly Roses.**—These old-fashioned Roses do not appear to have been in much demand of late, but now that we have such good additions as Duke of York, Irene Watts, Madame Eugène Resal, and Queen Mab, they may once more come to the fore. Probably we have no more certain autumnal bloomers than these. They commence to flower as early as any, are continuous, and seldom fail to carry a few presentable blossoms as late as the middle or end of November. The old Common Blush China has been introduced for a little more than a century, and is still a favourite in many cottage gardens. The Chinas have a close affinity with our Teas and Noisettes, often exceeding these in freedom of flowering. As a hedge of 3 feet to 4 feet the stronger growers are charming, and may be pruned very roughly without fear of losing blossoms. I would select the Old Blush, Mrs. Bosanquet and Abbé Melan as hedge plants. But it is against a low wall that is well sheltered that we find these Monthly Roses most at home. Here they grow and flower in delightful profusion. When the dwarf growers, such as Queen Mab, Cramoisi Supérieur, Eugène Beaulainais, Little Pet and Red Pet are massed thickly, there are few better or more permanent subjects for bedding. They are far from expensive, being the very easiest of all Roses to increase, and doing much better when grown upon their own roots than upon foster roots. In a warm nook or corner, especially if the winter be fairly mild, one can cut Roses all the year round, and late flowers stand well. Nor does this continuous blooming harm the plants for the ensuing spring and summer. They are the most thoroughly perpetual Roses we have. No matter what the season they are charming, and deserve far more

attention than they have received of late. Being few-petalled, they open freely, and whether the season be wet or dry, hot or cold, the Chinas will not fail us.—R.

**Roses at Kew.**—We rarely see Roses in full growth covered with buds and open flowers, and with foliage looking beautifully fresh, in October. A few varieties were seen in this condition then at Kew, and among them all, the beautiful Tea Rose G. Nabonnand is the best, the dark bronzed leaves, without a blemish, forming a perfect setting for the clusters of flowers and handsomely shaped pointed buds. Very nearly akin to the above in leaves and flowers, but not, perhaps, quite so free-flowering, was Clement Nabonnand, and other fine Teas or H.T.'s were Hon. Edith Gifford, Augustine Guinoisseau, Grace Darling, Abricote and Mme. Lambard. Some of the China Roses too were full of flower, the best noted being Laurette Messimy, with pink and yellow flowers that had much of the Tea Rose form about them; Fellenberg, deep pink and immense clusters, especially on lateral branches of strong shoots which appeared to have been stopped; Sanguinea, very fine, and Cramoisi Supérieur. A group of White Fairy, with large clusters of flowers much resembling those of Félicité Perpetue, but on a dwarf plant, was full of bloom. These late-blooming Roses are a great boon, and further additions will be very welcome. A large mass of Rosa rugosa Blanche de Coubert is now well in flower at Kew. This is a fine Rose with pure white flowers, borne in big clusters and almost fully double. The growth is particularly fresh looking, and only rose some 2 feet at most above the soil, which was completely hidden beneath it. This new plant will probably supplant the other whites in the class, as the flowers are more enduring, though not sufficiently double to appear lumpy, and the buds are shapely and chaste-looking.—J. C. T.

## FLOWER GARDEN.

### LINARIA ANTIRRHINIFOLIA.

This elegant little rock plant here illustrated was photographed in the nurseries of Messrs. R. Veitch and Son, Exeter, where it forms a very neat spreading mass about 2 feet across and about 6 inches to 8 inches high. It has the advantage of not spreading so rapidly as some of its congeners. It has flowered incessantly throughout the summer, and at the time of writing (November 2) is still in bloom. The flowers are arranged in a raceme and of a bright purple colour. The three-lobed upper lip is yellow at the inflated base, while the lower lip is marked with dark maroon veins. The corolla, calyx and stems are covered with minute hairs. The leaves are alternate, rather fleshy, ovate in shape, scarcely more than a quarter of an inch in length, with margins entire. The lower leaves are glabrous, the upper ones slightly pubescent. The plant is of the easiest possible culture, and can be highly recommended for the rock garden.

Elmside, Exeter.

F. W. MEYER.

**Seeds lying dormant.**—Is it usual for the seed of Castor Oil plants to lie dormant? A seedling has sprung up which must have been in the pot some five months.—E. O.

\*.\* As a rule, Castor Oil seeds germinate quickly, though occasionally they will come up in a somewhat intermittent manner, but even then five months is an unusually long time for a seed to remain dormant. Many subjects, however, are very irregular in their germinating, and a good deal of this depends upon the length of time the seed has been kept before sowing. Some of the Primulas, for instance, will grow at once if sown directly the seed is ripe, while if the seed

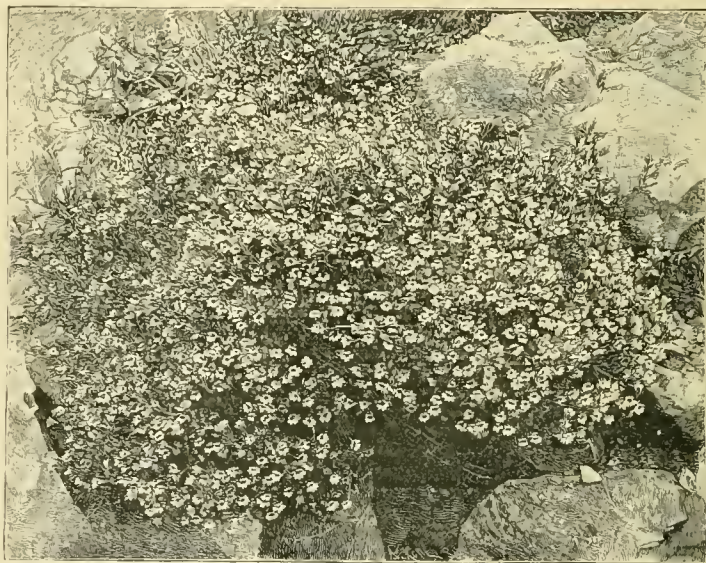
is kept a few months it will sometimes lie in the ground for a year or nearly so, and grow fairly well after all. When a quick-growing subject like the Castor Oil lies in the ground for an unusually lengthened period, the probability is that it is caused by a low amount of vitality, and the young plant is at first generally a weakling. I have had seeds of one of the Coral trees (Erythrina) lie for nearly two years and then several of them grew, whereas they generally germinate very quickly.—H. P.

### PLANTING SMALL BULBS.

DURING some years of practical experience among bulbous plants, and generally with large and varied collections, the question has been frequently put as to the depth at which certain bulbs may be planted. The answer usually given is that ordinary bulbous plants may be planted at twice their own depth, and though this may appear a fair and reasonable depth for many classes of bulbs, I am convinced by continued observation that this rule-of-thumb method is not at all times the best. By planting on the above lines, the very smallest

rather deeply embedded in the earth, though they descended to these depths is quite clear. Some few years ago I had through my hands several hundred thousands of Tenby Daffodil collected in Wales, all be lifted with their foliage as complete as possible. In measuring I found many bulbs had upwards of 18 inches deep, while an equal distance remained from the ground level to tips of the leaves. Here was a length of 3 of growth as the output of one small bulb. Under cultivation, too, I have repeatedly witnessed the same thing where chance bulbs have been buried through trenching the soil. Frequently I have found such things as Chionodoxa, Starch Hyacinth, Crocus species, Icojum vernum, &c., at a depth varying from 12 inches to 18 inches, while all have small bulbs.

The curious part of the whole matter is that all such bulbs produce much stronger stems, leaves and flowers above ground than those planted at the usual depth. For example, the sprouts of Chionodoxa have contained as many as eighteen flowers, always larger than those



*Linaria antirrhinifolia* in Messrs. Veitch's nursery at Exeter. From a photograph sent by Mr. F. W. Meyer.

of bulbs, for instance, the Snowdrops, Chionodoxas, Scilla, Starch Hyacinth, Fritillaria pudica, and all such, are brought very near to the surface. This nearness to the surface, particularly in the case of bulbous plants requiring a longer season of rest than the majority, surely cannot be good, when one day incites perhaps to a rapid start, and the next, by some extreme change of wet or cold or both combined, is equally calculated to retard in the same degree. Much of this undue excitement may be modified by planting many things at greater depth. In doing this, however, we must be guided entirely by local influences, especially of soil, although it is not expected that the increase would be material. Doubtless many who have choice collections of hardy bulbs would hesitate before planting some of the smallest of them, say, at 6 inches deep, and yet I feel that for a permanency many things would be safer than at the orthodox depth of, say, 2 inches or 3 inches. The Narcissus family, for instance, is now planted shallow for the most part, and so grown produces bulbs of capital form and with little neck. In Nature, however, the bulbs are often found

planted in the ordinary way. The same mark applies with equal weight to Snowdrops and other things. And while there is this doubted increase of vigour in these small rooted plants, the question appears to arise: Are we not losing a good deal through planting the majority of small bulbs too shallow? Particularly does this strike one in regard to naturalising hardy bulbous things generally, because if Snowdrops and Snow Glory can with impunity be buried at these greater depths, and then the flowers greatly increased in quantity and large size, there is surely something to be said in favour of very deep planting of such things. The only point upon which I have no trustworthy evidence is whether these bulbs, deep turned in by accident, appear at all in the ensuing year or not. This, however, could be readily determined by turning in a few such bulbs, and noting the result the next season. Less than a year ago I was an eye-witness at Long Ditton of an endeavour to raise some particularly strong examples of Chionodoxa Luciliae. While every care was used and some patience the general result was the same, and a lot

ched stem 12 inches or 15 inches in length away without the bulb. Now in the ordinary way we plant such things at 2 inches or 3 inches deep at most, yet we never see the sprays of blossom or even the stouter and more vigorous leaves from this treatment, and which is so noticeable in the deeply buried examples. At the latter will come to the surface actually there is no doubt, and flower abundantly and well, and at the same time be out of the way of ordinary interference. In trade sections the trouble is to get the ground where such things as *Muscari* and *Chionodoxa* have once been established. And if such bulbs can thus take this firm hold of any spot themselves, there is little to prevent their being planted in this way if anything may be deduced thereby. So far it appears to be a gain of greatly increased vigour all round; and if this is so with those named, other things, *e.g.*, *Neissus triandrus* and such like, are worth a try in the same way. E. JENKINS.

Ampton Hill.

ACANTHOLIMON.

A SMALL genus of beautiful alpinines, flowering usually in July and August when many of the other alpine flowers are past. In *A. venustum* and *A. glumaceum* (the former more particularly) the tufts are composed of rigid, downward-pointed leaves that are very spiny. *A. glumaceum* is of the same tufted growth, but not so spiny. These pretty alpinines are not at all difficult to grow, and, if we except the plants just mentioned, prefer a light sandy loam about 1 foot deep and a partly shaded position in the rock garden. *A. glumaceum*, on the other hand, by reason of its free, vigorous growth and more profuse flowering, is better suited to soil that is deep and rich, at the same time not too heavy. This species is easily increased, and makes a capital edging to paths and beds in many parts of the garden. The other species are of decidedly slower growth and difficult to increase, unless seeds are obtainable, which is not always the case. As regards the general propagation, and where large plants of the rare kinds exist, it is a good plan to work some cocoa-nut fibre and sand in equal parts into the tufts in early autumn. Before working in this material some of the shoots should be gently torn, so as to half sever them at the heel or junction; then gently work in more material around and water to settle the soil. Many of the growths thus treated will root by spring. Cuttings made in the ordinary way are by no means certain, but when this method is adopted August or September is the best time. All cuttings so-called should be torn off with a scalpel and inserted without further ado. Cuttings made to a joint are only so much waste material. The following are the best kits:—

**ACANTHOLIMON GLUMACEUM** is the best known and so the most vigorous and free grower, producing compact cushions of narrow dark green leaves that are spiny at the point, and spikes of rose-coloured flowers from June to August. Given liberal treatment and a deep sandy soil, this free-growing plant is of the easiest culture. At least many years ago this species formed an edging a foot or more wide and about 150 feet long and when in flower was a pretty object. Such free-grown plants may be pulled to pieces readily, and if done in April, the losses will be very few. Firm planting is most essential. This species is about 6 inches or rather more high. Native of Armenia.

**A. VENUSTUM**.—This is the best of this little group, and a really delightful plant when seen in good condition. I lost the finest specimen I have ever seen during the great frost of 1895. The

plant, unfortunately, had been left fully exposed with other alpinines in pots. This lovely species in the summer of 1894 produced some forty spikes of its charming pink blossoms. The tufts are dark green with a slightly greyish or glaucous tint overlying the same. This species is of much slower growth than *A. glumaceum*, and requires some good sandy loam, with leaf soil and broken brick rubbish mixed freely with the soil. It produces its rose-pink flowers in July on one-sided, slightly arching spikes, and is certainly one of the most charming of midsummer alpinines. Very firm planting, a rather sheltered spot, and a deep soil, well drained, should be given. It is a native of Cilicia, and grows about 6 inches high. If seeds could be obtained freely this would make a most beautiful plant, but I have not yet been able to obtain a crop of seeds after many trials, and would gladly welcome any hint to bring this about from either home or continental growers of this fine species.

**A. ANDROSACEUM**.—This species is easily distinguished from all else by the more dense tufts which it forms when established, as also by the rosettes being less spiny. This is not so much due to the spines as to the pliant nature of the leaves. It is of easy culture, spreads somewhat freely over a ledge of rock, and produces pink blossoms on sprays 4 inches high.

**A. ACEROSUM**.—The very dense character of this species and the grey glaucous hue of the leaves at a short distance remind one of *Dianthus cæsius*. A closer inspection, or even an unwary placing of the hand upon the spines, will quickly dispel any such idea, since the short, greyish glaucous leaves are the most spiny of all. In growth it is much more compact than *A. venustum* or *A. glumaceum*. The flowers are pink, and produced freely on stems nearly 6 inches high. From Asia Minor.

These, I believe, are all the species at present in cultivation. The following information has been gathered from the dried specimens at Kew:—

**A. KOTSCHYI** is about 4 inches high, with distinctly broad leaves, being spiny and freely flowered, blossoms white.

**A. ARMENUM** has pink blossoms on sprays nearly 6 inches high.

**A. CEPHALOTES** has rosy pink flowers in globose heads, the latter resembling the *Armeria*, while the spiny leaves are less numerous in the rosettes than in most kinds. This comes from Kurdistan.

**A. LANCEOLATUM** is the tallest species, growing about 9 inches high, the leaves long and narrow.

**A. LIBANOTICUM** is exceedingly woody and dense in growth. It is a Syrian species, with flowers of pink blue.

**A. PINARDI** also has pink blossoms, the specimens varying in stature, possibly on account of age.

So far as could be determined by dried specimens, many of these not now in cultivation are very beautiful, and, from the general scarcity of good midsummer alpinines in the rock garden, would be greatly prized. If seed could be secured in the native habitats of the plants, this would constitute the best method of introducing them to cultivation. E. J.

**Panicum bulbosum**.—It would appear this plant inherits its specific name from its bulbous root, while the nearest approach to this character I have seen is an enlargement of the stems just below ground. As an isolated specimen, however, it is a most elegant species, and both its habit of growth and light, graceful bearing when in flower are sure to attract attention. Being only 3 feet high and quite compact, it is worth a place in the border or with a mixed arrangement of plants in groups.

**Carnations**.—My hearty sympathy is with all Carnation growers who fail with these as *bound fide* hardy plants, that is who are reduced to the necessity of potting up layers and keeping them under cover through the winter, and it certainly does surprise me to know that only ten miles

away "J. C. B." is compelled to resort to the practice. I think he will have to look further than fog to find the cause of failure; at least, we get fog badly here in some seasons, and I have found no ill effects from the same. Some four or five years ago a spell of very sharp weather was preceded by fog that was continuous for several days, leaving everything at its departure with a black coat and necessitating the washing of all glass. The sharp weather following close was fatal to a considerable quantity of saturated vegetation, and I remember fearing the Carnations had shared the same fate; but, as a matter of fact, the loss that year was only about 3 per cent. If failure has resulted from autumn planting, I should certainly advise leaving the layers as they are until the spring, planting then before resorting to potting up. Many theories have been advanced as to the cause of failure, and possibly we are not yet at the root of the matter. I still think, however, it is in a great measure the result of weakly, indifferently-rooted layers.—E. BURRILL.

A TRIP TO FAIRYLAND.

THERE are on occasion gardens not made intentionally by human hands which in the fulness of their beauty make all man's efforts vain. Such, at least, was our experience the other day when journeying southward from England. We had passed a day and a night crossing the plains of France, which lay bare to the chill autumn sky, shorn alike both of leaves and crops, waiting patiently for the winter's shroud of snow. After a night of fog and keen white frost we slowly climbed the northern slopes of the Alps while the rising mists obscured our sight. Cold and grey looked the fresh-fallen snow on the top when first we reached it; bleak and wintry was the outlook as we went steadily on; but as we descended again the sun broke out in southern splendour, and turned the grey powdery snow to dazzling diamonds. Then, suddenly in our descent we turned, and in an instant we were in fairyland! Surely those trees, those shrubs, those clambering Vines were not real, but fairy trees, fairy bushes, made of rubies, made of gold? Surely those slopes so rich and green were emerald, those spiry trees, that flamed in the nearer distance and paled as they mounted higher, were of chryso-prase, powdered with diamond dust as they neared those unapproachable peaks which glittered as no diamonds could shine save in fairyland? Higher and higher towered those brilliant peaks in our descent till we could gaze no more at their dazzling brightness, and turned our eyes to that sky which spread over us a celestial vision of purest turquoise. For two hours did this panorama of gorgeous colour, rich in beauty of form and radiant with light, defile before our eyes while we sat absorbed, lost, entirely void of any desire save to gaze and gaze again lest this fairy vision should fade from our eyes; nor till in our descent we came to a deep dark gorge which barred the upland from the plain did we lose this unspeakable glory; then in an instant the curtain fell and we were in the work-a-day world again! Such an enchanting experience is worth seeking, and I would advise all those who are in search of a new sensation to visit the higher slopes of the Southern Alps in October, when these glories are at their fullest. No words can give adequate expression to their beauty.

Once more down in the rich plains of Lombardy, reeking with autumn rains after summer heats, the rank growth and entire absence of rich colour are the more striking after the glowing threshold of the Alps, but in the gardens of Milan there is much to attract the eye of the wanderer, and if he be a gardener, to compel

his attention and admiration. Although November is near, the splendid specimens of *Musa Ensete* in the public gardens and squares are fresh and green, their solid leaves untouched by any autumn blast. Beds of tall crimson *Celosias* rejoice in the warm sun, while graceful scrolls of dwarf *Ageratum*, *Alternantheras* of varied dyes, and *Sedum carneum* (most happy foil to such bright hues) attract a northerner's eye. Scarlet *Hibiscus* bushes and tree-like specimens of *Erythrina Crista-galli* still show bravely, while tall white *Cactus Dahlias* in the most superb masses of bloom fill with envy the mind that recalls the black devastation wrought by frost weeks ago in northern lands. Perhaps, too, the tall standard plants owe their freedom of bloom to being kept to one single and tall stem, and suggest the thought that in suitable places it would be well worth trying its effect in England. Standard *Magnolias* are conspicuous by their coned heads of crimson seeds, which show brilliantly against the pale lemon of the *Ginkgo* (*Salisburia adiantifolia*) trees and the more cinnamon shades of deciduous *Cypress*, while the *Plane* and *Sophora* trees still keep their summer dress. E. H. W.

#### SHORT NOTES.—FLOWER.

**Violets.**—I had an opportunity of comparing four of the large-flowering Violets the other day, viz., *Victoria*, *Princess of Wales*, *Princess Beatrice* and *California*, and should decidedly give the palm to the first-named. The difficulty with all these in the majority of soils is that they are decidedly shy.—E. B. C.

***Sempervivum arachnoideum.***—It is surprising how very effective are the Cobweb Houseleeks when cultivated in large patches in the rock garden. To get the best results, prick out a group of the rosettes 2 feet across or more on an uneven surface, allowing an inch between each for development. With a season's growth many offsets will be produced, and, treated in this way, the rosettes generally will be much larger than usually seen.

### ORCHARD AND FRUIT GARDEN.

#### LATE PLUMS.

THE Plum is amongst the most useful fruits grown when it is taken into consideration the many purposes for which it can be used and the length of time good fruit may be had. The late kinds are the most useful, as at this season all other soft fruits are over. To grow late Plums profitably in the open, the trees must be given wall space. They succeed in almost any situation, but I prefer them on a west aspect, although I have a tree of *Coe's Golden Drop* on a north aspect, and often I get good fruit from this tree as late as November. It is very important to protect these late kinds in the open early with some kind of material, such as frigi domo, to keep insects from destroying them, as if they are the least damaged they will not hang. Another reason for protecting them is to keep the fruit dry. In damp seasons this is a serious drawback to fruit on the open walls. Having this evil to contend against (as this garden lies low), I resolved some years ago to grow some late Plums in a cold Peach case, and nothing could be more satisfactory. They may be grown either in the bush form or trained to a trellis. Many cultivators do not succeed with them under glass when planted out, either from not giving them enough air, or from allowing them to grow too strong and get coarse rooted. The best managed trees I ever have seen have been those that have been pinched during the growing period, so that no pruning was needed in the winter. Should they get too

strong, which young trees are prone to do, then I lift them, doing one side this year and the other side the following should it be needed, keeping the roots near the surface. When the trees commence bearing there is no danger of this under glass. I have a long Peach case with a trellis in front, the lights sliding open in front to give air. This trellis is within a foot of the glass, and in this position the Plums prove most satisfactory. In one house I have three trees, one of each of the following kinds: *Reine Claude de Bavay*, *Coe's Late Red*, and *Coe's Golden Drop*. This year the crop was grand, the first named kind coming in first and keeping up the supply well into October, this being followed by *Coe's Golden Drop*. The tree from which this illustration was taken gave me good fruit for dessert for eight weeks. I gathered the last fruits on November 2. The crop was heavy; on some shoots a foot long there were about three dozen fruits. These were thinned. By the side of this tree is grow-



*Plum Coe's Golden Drop.* From a photograph sent by Mr. J. Crook, Forde Abbey, Chard.

ing *Coe's Late Red*, and although not to be compared with the former for flavour, it is nevertheless a useful late kind, and I doubt if a later kind is to be found, as I often have good sound fruit from this tree at the end of November. These are most useful for kitchen use, seeing there is but little at this season for pies and tarts beside Apples. Other good kinds for growing under glass are *Ickworth Imperatrice*, *Archduke*, *Grand Duke*, *Monarch*, and *Wyedale*. Another recommendation for growing some trees under glass is the advantage of having a crop in seasons when there is no crop outside. When grown under glass they can be allowed to hang a very long time. The treatment the trees receive here is the same as that given to Peaches. I give the border an abundance of water at all seasons, more especially during the growing period, with manure

water when the fruit is swelling off. In many instances late Plums would pay far better to grow than Peaches, seeing they are much more hardy and a good price can be made of high class Plums when Peaches are over.

*Forde Abbey.*

JOHN CROOK.

**Strawberry Waterloo.**—A rather large grower for market in this neighbourhood think highly of this Strawberry, and a large break of it just recently was looking remarkably well from this year's runners. The fruits of course, as is well known, are good in flavour, and, coming late, it is very valuable. The grower mentioned has found that it is not reliable under ordinary culture, that is, renewing the beds about ever three years, but if left alone and fed from the surface it remains fruitful for a great many years. This reminds me of a garden in the west of England where several lines of this variety had been grown in a north border for many years, and every season fine crops were gathered over a long period. It is worth trying when this kind does

not thrive under the usual conditions, and I am having some plants to see if they will improve by being longer on the ground. If not, I shall have to discard it, though reluctantly. I should like to hear the opinion of other growers who may have tried leaving it on the ground for several years.—R., *Bury St. Edmund*

**Apple Sturmer Pippin.**—As a dessert Apple to succeed the *Nonpareil Sturmer Pippin* stands unrivalled, for not only is it an excellent keeper but it does not attain full flavour until late in the season, when late dessert Apples are becoming scarce. It is a seedling from *Ribston Pippin*, obtained by crossing this with the pollen of a variety of *Nonpareil*, and the flavour when in perfection is a combination of that of both the sort named. As a garden tree it is a capital cropper and although but a medium grower it is hardy, the wood partaking of the character of that of *Old Nonpareil*. It is also recommended for growing as a standard. The late Dr. Bull formed so high an opinion of this Apple that he was at great pains in distributing number

of scions of it some thirteen or fourteen years ago. He consigned a good bundle to me at the same time for distribution, but I am afraid that it has not led to such a large increase in its cultivation as it deserved, as it would be a valuable Apple from a market point of view if carefully gathered, properly stored and disposed of during the month of March. Like all other late kinds *Sturmer Pippin* should be allowed to hang as long as possible before being gathered. If this is not done the fruits lose much of their high flavour, and are apt to shrivel.—A. W.

**Pear Magnate.**—A few weeks ago I sent you a note about this Pear, as to its fine appearance, &c. Since then the fruits have ripened and have given the greatest satisfaction. Not only was the flavour most excellent, but the flesh was quite melting and entirely devoid of grittiness. I shall certainly give it a trial as a bush tree. I need only all that Mr. Wythes has to say with regard to it

behaviour with him, and there appears to be a difference of several weeks in the ripening in the two districts, for which I think the soil may be accountable, as my trees are growing on a northern aspect.—A. W.

**Apple Ross Nonpareil.**—Of the whole family of Nonpareil Apples, this variety I think could be considered the hardiest and most vigorous of them all. When grown as a standard in an orchard, and allowed to grow unrestricted, the tree soon attains to large proportions and bears enormous quantities of fruit. Even when grown in the more restricted forms it grows very freely, and leaves nothing to be desired from a cropping point of view. It is not, I think, generally cultivated, but none the less valuable as a dessert fruit on that account, and, although too small for market, it is a splendid little Apple to grow for private use, as it keeps in excellent condition until the end of February. The fruits are regularly formed, inclining to be conical, or not so flattened as many of the other varieties of this class of Apples are, and they are generally nicely coloured. The flesh is crisp, and possesses a rich, sugary, aromatic flavour.—A. W.

**Grape Lady Hutt.**—This new Grape I purchased last year sent out, and fruited it for the first time last year. I was not altogether satisfied with its appearance, but formed a high opinion of it as regards flavour and keeping. The fault I had to find with its appearance was that it failed to colour properly, for when perfectly ripe the berries were still of a greenish hue. As regards flavour it was exceedingly good for so early a variety, and that a white one: the flesh being very sweet and refreshing I resolved to give it a further trial. This season it has coloured much better, the greenish hue complained of having disappeared, and the berries have assumed a light amber tint. This I attribute to having tied the foliage on one side so that the bunches got an abundance of light. I am inclined to the belief that this, the only drawback to what I consider will eventually turn out to be a valuable late Grape, can be overcome by giving the bunches, when on the point of colouring, free exposure to the light. In all other points this variety is very satisfactory, the Vine being a vigorous grower, and it produces an abundance of healthy foliage, which is of a firm leathery texture.—S. E. P.

#### POT STRAWBERRIES.

Those who take special means to secure a supply of runners will have good reason to congratulate themselves this season. To depend entirely on plants that have fruited is to court disappointment and partial failure. The production of a crop of fruit is quite enough to expect from a Strawberry plant, and if it fulfils reasonable expectations in this respect the grower should be content and not exact from it. To plant the runners that are to give him his chief and perhaps most important crop. The immature badly rooted plants that one so frequently sees in private gardens are almost invariably obtained in this way. Runners made from old fruiting plants are generally later, and are rarely so free of growth as those produced by young plants that were set out either in the previous autumn or in spring. By planting expressly for a supply of good runners the Strawberry grower kills two birds with one stone. He makes use of securing a good lot of runners for early sowing, and also guards in the most effectual manner against a break in the outdoor supply. It is, I consider a mistake to employ runners from fruiting plants for making new plantations in the open. The check that is given to plants which are carrying a good crop is sure to communicate itself to the runners, and puts into them an element of weakness from which they never, even with the best of culture later on, quite recover.

To use runners of this description is a penny wise policy, the only place for them is the rubbish heap. In a very hot and dry season, when the fruit ripens off under a scorching sun, the runners are made so late that it is impossible to get the soil in 5-inch or 6-inch pots thoroughly filled with roots by the close of the growing season. I always plant out good strong runners in the early part of October, as I find that when the spring months are very dry they make a much stronger growth than those set out in spring. I set them out 15 inches apart on ground from which Potatoes have been lifted. I choose a time when the surface is dry, take up the young plants with a nice ball of earth, tread them in, and if the weather seems likely to remain dry, water them in. In the course of a few days they begin to take hold of the ground, and by winter they are well established and secure against frost-heaving. The hoe is used freely among them through spring and early summer, and in a general way runners are made very freely. If the first runners are used and layered when formed they will make very fine plants with about five crowns each, and the soil thoroughly matted from the drainage to the surface with roots. The secondary runners layered about the middle or end of August will make good plants with a couple of crowns, and if these are kept in 4½-inch pots they will in a general way bear hard forcing better than larger plants.

Many are too anxious to get their plants into what are called fruiting pots. It is a mistake to suppose that fine fruit cannot be produced in pots less than 6 inches across. I have grown plants side by side in pots ranging from 4½ inches to 8 inches in diameter, and could see no difference in the quality of the fruit they produced. When the runners are later, or not so strong as could be desired, it is wiser to keep them in rather smaller pots, unless they are only to be brought along gently for fruiting in May, when the roots are so much more active. Some prefer to layer the runners into small pots, but if runners of the proper quality can be had I see no advantage in doing so. The old-fashioned way of ramming the soil hard into 6-inch pots is the most economical as regards labour, and the results are equally good if a sufficiently early start is made. As soon as the roots begin to travel freely round the sides of the pots the plants can be removed to a more convenient place for watering, which, as with all things grown in pots, is a most important matter. In the case of plants that are rooted early in July, a lot of moisture will be needed in hot weather, especially during August, when they become root-bound. They will want looking to three times daily; in fact, they must never be allowed to get dry. There is an immense difference in the condition of plants that have been attended to in this way and those that have been managed without due recognition of the importance of this detail. The crowns will be stouter and the foliage will remain in good order until young leaves begin to form again. Just as growth is coming to a standstill and the crowns and leaves are maturing, frequent waterings with soot water are helpful. It frequently happens that the soil by that time is to a great extent exhausted, and this causes the foliage to lose in some measure its healthy green colour. Soot water is at all times beneficial, more especially in autumn and in the earlier stages of growth when the plants are forced. I am not at all in favour of using strong stimulants, even in a weak form, until the fruit is swelling, but soot can hardly be termed such, its action on plants being rather to impart colour to the

foliage than to promote actual growth. It is too drying to be of much use during periods of hot weather, when frequent and liberal supplies of moisture are needed, and I have never seen that it has any appreciable influence on the swelling of the fruit. J. C. B.

**White Raspberries.**—Although these fruits have flavour quite equal to the red kinds, are good croppers, and in every respect are as nice for eating, yet prejudice against colour prevents their culture generally. White Raspberries, it is feared, would have a very poor chance against reds in the market. But did persons having gardens but know how relatively sweet they are, no doubt more would be grown. The oldest is the White Antwerp, which has been with us probably for a century. The White Magnum Bonum is finer and extremely pleasant eating, but the finest of all is the new white Superlative, from the red form of which it is either a sport or a seedling. In any case the fruits when ripe are like pale yellow Superlative fruits, and the plants have that famous variety's habit and appearance. I saw this in Messrs. Bunyard's nursery at Maidstone last autumn, and could but realise that it presented a most valuable addition to our few white Raspberries.—A. D.

**The Quince as a decorative tree.**—There are few fruit trees that so well merit planting for decoration as the Quince. The habit of the tree is drooping, the growths coming quite to the ground. When in full bloom the heads are beautiful objects, and when the fruits are ripening they help then to make the tree very attractive. The fruits will also hang for a long time after colouring unharmed. There are several varieties, but the old favourite Pear-shaped seems to be the best. It is hardly needful to assert that the fruits may be put to useful domestic purposes—so much is very well known. With Quinces may be added Morello Cherries, Worcester Pearmain and Col. Vaughan Apples, Siberian and other Crabs, and even Farleigh Prolific Damson, for these trees bloom profusely, and the fruits, after colouring, will hang for a long time, whilst none are more pleasant eating than are those which fall on the grass. Many deciduous trees planted on lawns are not half so pretty as are these fruits.—A. D.

**Californian Pears.**—Although the samples of Pears sent to the Drill Hall the other day from the highly-favoured clime of California were excellent of their kind, and evidenced how admirably fruits of this nature properly packed can be sent safely into the English market, yet was there in the samples nothing to be highly enraptured over. Comparison of the best Doyenné du Comice, for instance, with the fine fruits shown in the flavour competition showed ours to be of firmer flesh, really less watery, and distinctly more highly flavoured. The fruits were also larger and richly coloured. Beurré Diel cut in half showed grit round the core most unmistakably, this feature being more marked than is seen on our wall fruits. Winter Nelis was, of course, early and fine, but it did not excel ours in flavour when ripe. The matter to deplore is that fruit culture does not more generally follow upon nursery and the best private garden lines, producing for us the most superb samples skill and the climate can produce. It is only in that way, and carried out on a very large scale, that we can hope to contend with what other countries send us. The care bestowed in packing is of course also of the very best; indeed it is almost perfect. If our best fruits were wrapped in tissue paper, set in shallow boxes, packed neatly with wool, and in that way sent to market, the returns would far more than compensate for the trouble taken to send the fruits for sale in the most perfect condition.—A. D.

**The fruit trees.**—Comparing the autumn of last year and that of the present—the former so wet, the latter so dry and warm—we see as a result that fruit trees have ripened leafage in perfect form, and often with beautiful colour, that

wood is very hard and that buds are plentiful and plump. That is a different state of things from what existed in so many directions last autumn, when the excessive rainfall so materially helped to excite root action and to promote leaf and bud activity after it was assumed that all wood and buds were perfectly matured. Now that leaves have fallen no amount of rain would unduly excite roots, even though the soil is generally unusually dry. The rain, whilst moistening ground, would also lower its temperature, and thus check activity. It will therefore be very interesting next spring to note the diverse effects (if any) on fruit production. Generally the operation of last year's wet autumn has been very adverse to fruit, the best crops being found on old or somewhat stunted trees little affected by too abundant root moisture. Possibly next year we may see, as a result of the present fine condition of the trees, a large fruit crop. So much I fully anticipate, but much rain will be needed to fit the roots and trees to withstand the stress of large crop-production. Very largely cold winds and frosts were credited with such harm to the bloom last spring, leading to its ultimate barrenness, but there has been no proof furnished yet that the fine bloom of that time was efficiently supplied with pollen to produce fertility; indeed, it was believed that the heavy rains of the previous autumn were inimical to its production. With the assurance of a fine bloom next spring, we shall then be able to see whether fertility results or otherwise.—A. D.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

NOVEMBER 9.

OWING no doubt in a great measure to the gloomy condition of the atmosphere, with a heavy fog hanging over the metropolis and extending far away into the country, the exhibitors who usually patronise these meetings hesitated somewhat, not caring to risk their productions under the circumstances. There were counter attractions of course amongst Chrysanthemum growers at the meeting of the National Chrysanthemum Society at the Aquarium and that of the Kingston Society, both of which open on the same date. Certainly the extent of this meeting from some cause or other fell far short of its usual character.

Orchids were shown in good numbers, notably so the newer hybrids, of which the Cattleyas and Lælio-Cattleyas were specially fine. A finely-grown lot of Dracaenas and Cordylines was staged in an informal group. The style of this arrangement should be noted by exhibitors; it was somewhat in the way of the letter S. Several good examples of Tree Ivies were an interesting feature, the foliage of the silver and golden varieties being in excellent character. Of Chrysanthemums, there were several of the newer kinds staged for certificates, and a splendid group of cut blooms of high-class quality came again from Syon House, which makes the third occasion in succession whereat Mr. Wythes has contributed to the display. On this occasion there were about 100 varieties or thereabouts, chiefly in triplets, arranged informally upon a carpeting of Maiden-hair Fern, making as an exhibit the finest display in the hall. Fruit was not shown in any great quantity, the best exhibit by far being four grand baskets of highly finished Gros Colman Grapes from Somerset. The condition of the atmosphere militated greatly against this meeting, it being impossible to examine anything under favourable conditions.

#### Orchid Committee.

First-class certificates were awarded to the following:—

**CATTELEYA FABIA.**—A hybrid between Cattleya labiata and *C. aurea*. The sepals and petals are of fine form and substance, deep rose in colour. The large lip, having the intermediate characters

of both parents, is deep rose-purple in front, shading to a deeper purple in the centre, the side lobes deep purple, lined with yellow towards the base, where it has also a shade of bright brown. From the Rt. Hon. J. Chamberlain, Highbury, Birmingham.

**CALANTHE VEITCHI ALBA.**—A lovely clear white form of this well-known Orchid, the only trace of colour being yellow in the centre of the lip. The plant bore a raceme of twenty-five flowers. From Messrs. H. Low and Co.

Awards of merit were given to—

**CATTELEYA LABIATA LEWISI.**—A lovely form with pure white sepals and petals: the lip rich purple, mottled and margined with pure white, the side lobes white, shading to yellow at the base. The plant carried a raceme of three flowers. From Messrs. W. L. Lewis and Co., Southgate.

**CYPRIPEDIUM LEEANUM MAGNIFICUM.**—Very similar to *C. L. giganteum* of Cypher. The dorsal sepal is upwards of 3 inches across, clear white, shading to green at the base, where it is slightly spotted with brown, the petals pale green, suffused and spotted with brown: the lip chocolate-brown, shading to deep green. From Mr. G. Shorland-Ball, Wilmslow.

Messrs. J. Veitch and Sons sent a choice collection of hybrid Cattleyas and Lælio-Cattleyas, the most prominent being a fine form of *L. C. Decia* (*L. Perrini* × *C. Dowiana aurea*). The *Dowiana* parent becomes more pronounced as the plants grow stronger. Lælio-Cattleya Novelty, a distinct form, with pale rose sepals and petals, lip deep crimson-purple, shading to yellow, lined with purple at the base, is the result of crossing *L. Dayana* and *L. C. elegans*. Cattleya Eurydice (*C. labiata* × *C. Aclandæ*), certificated last year; *Cypridium Tityus* (*C. Spicerianum* × *C. ænanthum superbum*), a lovely form, the dorsal sepal white, suffused with rose at the top, shading to green, spotted with purple at the base; a fine form of *C. Niobe*, and a large-flowered variety of *C. Euryades* were also included (silver Flora medal). Messrs. W. L. Lewis and Co., Southgate, sent about fifty plants of *Lælia pumila*, which were well flowered and showed remarkable form and substance. The group also contained *Mormodes pardinum*, good forms of *C. Loddigesi*, and fine forms of *O. Rossi majus* (silver Banksian medal). Messrs. F. Sander and Co. sent a small group, which contained fine forms of Cattleya labiata, *C. aurea*, *Lælia Eyerma niana*, a finely-flowered mass of *Sophranitis grandiflora*, *Dendrobium Johnsonæ*, *Lycaste Skinneri*, and a cut spike of *Renanthera Lowi* with thirty-two flowers (silver Banksian medal). Messrs. H. Low and Co. sent a small, but choice collection, consisting of good forms of *Vanda cœrulea*, grand forms of *Cypridium Leeannum*, *C. bellatulum album*, *C. Niobe*, a hybrid of the *C. concolor* class, and Cattleya labiata with a slate-coloured lip.

Mr. G. Shorland-Ball was awarded a silver Banksian medal for a grand collection of *Cypridium*s, which included two plants of *C. insigne Sanderæ*, one with six, the other with four flowers. *C. Memoria Moensi*, *C. Niobe*, *C. Leeannum*, and *C. ænanthum superbum* were well represented. The group also included good forms of *Masdevallia Veitchi* and *Dendrobium Phænopsis album* with three flowers expanded. Mr. C. J. Ingram sent Cattleya Comfrey (*C. Lawrenceana* × *C. Warscewiczii*). The Rt. Hon. J. Chamberlain was awarded a silver Banksian medal for a choice collection of hybrid Cattleyas, consisting of Lælio-Cattleya Sallieri (*L. purpurata* × *C. Loddigesi*), *L. C. Semiramis* (*L. Perrini* × *C. Gaskelliana*), the sepals and petals pale rose, lip purple, with some white in the throat; Cattleya marseillensis (*C. aurea* × *C. Trianae*), and *C. Mr. Endicott* (*C. maxima* × *C. Loddigesi*), in which the *maxima* parent was most prominent. Mr. W. Vanner sent a group of cut *Cypridium*s, prominent amongst which were good forms of *C. Spicerianum*, *C. Niobe*, *C. Schrœderæ*, *C. Eyermannianum*, a dark form of *C. ænanthum*, and *C. Vanneræ* (*C. Veitchi* × *C. selligerum*). *Odontoglossum Dormanianum*, a spotted form with seven flowers on the spike, was also shown. Mr. S. G. Lutwyche sent

*Cypridium Pavonianum* and another seedling in the way of *C. Indra*. Mr. J. T. Bennett-Po sent *Cypridium Phoenix*, a distinct hybrid, the dorsal sepal white, suffused with rose in the centre and spotted with brown at the base, the petals pale green, suffused and spotted with brown, and a good form of *Vanda Sanderiana*. Mr. H. Tate, Liverpool, sent two hybrid *Cypridium*s and a *C. insigne* with two dorsal sepals.

#### Floral Committee.

Awards of merit were given to—

**WALLFLOWER PARISIAN EARLY.**—This is a fine acquisition for autumn, being of sturdy habit, flowering most profusely, and having a very powerful scent. The colour is a rich golden yellow tinged with dull red. From Messrs. Veitch and Sons.

**BOUVARDIA HUMBOLDTI GRANDIFLORA.**—This a large variety, of handsome growth and splendid habit, the blooms very large, pure white and sweetly scented. From Messrs. Crane and Clark March.

**CHRYSANTHEMUM ADMIRAL ITO** (Japanese reflexed).—A beautiful bloom, very large and full rich sulphur-yellow in colour and very graceful growth. From Mr. Godfrey, Exmouth, Devon.

**DRACENA INDIVISA BURTONI.**—This is a handsome plant with dark bronze foliage, the leaves long and narrow. It is very distinct and beautiful. From Mr. R. Gülzow, Bexley.

**SONEHLA LADY BURTON.**—A large-leaved variety with an abundance of lilac-coloured flowers. The foliage is silvery, veined with light green. This is a very striking plant, and was shown by Sir Trevor Lawrence, of Burford, Dorking.

**DRACENA ALBO-LINEATA.**—A green and white variegated form of graceful habit, narrow-leaved and very effective. From Mr. R. Gülzow, Bexley Heath.

Of considerable interest was a group of seedling Dracaenas from Mr. R. Gülzow, Melbourn Nurseries, Bexley Heath, Kent. Every plant was in splendid condition, perfectly clean, and the picture of health. The foliage of the colour varieties was very brilliant, and the group was arranged with great taste (silver-gilt Flora medal). Cut Chrysanthemums were again admirably shown by Mr. Wythes, gardener to Earl Percy, Syon House, Brentford. The collection of the time consisted of seventy-two varieties and made a very brave show. Surely this magnificent group deserved a higher award, seeing that the previous meeting for only six dozen blooms the same award was given. What encouragement have private growers to bring their products to the Drill Hall if all are to be served in the way of a few of the best were Hairy Wood Oceana, W. H. Fowler, Pride of Madford, Moncherotte, Col. W. B. Smith, John Lightfoot Mlle. Thérèse Rey, Lord Brooke, Graphic, An Perry, Vivian Morel, Robert Owen, and Roy Sovereign (silver Banksian medal). A few very fine new varieties were shown by Mr. Godfrey, Exmouth, Devon. The most striking were Mrs. M. Grant, a bronze-yellow, with looser petals and Lady Northcote, a pretty pink. A small collection of late seedling Pentstemons came from Mr. C. F. Thompson, Llandaff. They were very good for the season of the year. Messrs. H. Low and Co. sent a group of Carnation Matthe Winter Red, a sweet-scented variety of compact habit, with shapely blooms, fairly full, and freely produced. Mr. Robert Owen, of Maidenhead, exhibited a few very good new incurved Chrysanthemums, among them Creole, a dark maroon good shape; Thomas Singleton, a charming pink white; J. Lockyer, a pleasing light pink; Arthur King, a rich bronze-yellow, very even the petals. Messrs. Veitch and Sons sent plants of *Aster grandiflorus*, a large and handsome variety. Messrs. W. Balchin and Sons, Hasso Nurseries, Sussex, sent *Diplacus Jubilee*, a charming pinkish terra-cotta variety, and *D. ruber*, a stronger-growing plant of dull red colour. John Russell, Richmond, Surrey, staged a group of Ivies in great variety, well-grown plants

ry strong, the foliage of good substance (silver Banksian medal).

#### Fruit Committee.

This was one of the smallest meetings of the year, but this committee had its share of exhibits. The Grapes from Frome were excellent, and there was a nice collection of Pears from Belvoir Castle. Mr. W. Iggulden, Fruit and Flower Nurseries, Frome, Somerset, sent four baskets of Gros Colman grapes weighing 48 lbs. These were excellent in such and berry, and we think deserved a higher yard than a silver Banksian medal. The way the fruit was packed was an object-lesson. Mr. Iggulden (gardener to the Duke of Rutland, Belvoir Castle) sent thirty-two varieties of Pears, of large, but of excellent quality. Emile Heyst was very good, as also were Glou Moreceau, Doyenné du Comice, Josephine de Malines, Brown Curré, Marie Louise and Durondeau. There were also some stewing varieties (silver Banksian medal). A new Apple named Munster Pippin came from Messrs. Hartland and Sons, Cork. It is a nice fruit, large, bright red, but not considered superior to those in commerce. A new Pear came from Mr. A. Knowles, Woking, but much past its best. Messrs. Harrison and Sons, Leicester, sent a large collection of Beetroot, shapely roots and of good colour. The best were Cheltenham Green Top, Ragnell's Exhibition, Covent Garden Black, Turnip-rooted in variety, and some large-leaved kinds not so much known, but of good quality (ronze Banksian medal). One of the most noticeable exhibits was the Cucumber from Mr. Thomas, the Royal Gardens, Frogmore. It is named All the Year Round, and is a cross between Richard's Market and Dickson's All the Year Round. It is a smooth, shapely fruit with small neck and good colour. It was asked to be seen again somewhat later in the season. Mr. Wythes sent new seedling Cabbage named St. Martin, an autumn variety, and of great merit as regards size, shape, and colour. It is quite distinct from the Colewort and Drumhead Autumn Cabbage. It will be tried at Chiswick.

The Veitch prizes for flavour brought forth nine dishes of Apples and the same number of pears. For Apples, Mr. Turton, Maiden Erleigh, Reading, was first with Cox's Orange; second, Mr. Woodward, Barham Court Gardens, Maidstone, with Ribston Pippin. For Pears, Mr. Woodward was a good first with Doyenné du Comice, the Rev. H. Palmer, Reading, being second with Glou Moreceau. The other Pears were Brown Beurré, Doyenné du Comice, and Beurré Diel; and of Apples, Cox's Orange and Ribston mostly.

A meeting of the above committee met at Chiswick on Nov. 5 and examined late Potatoes and cabbages. Of the former, two varieties received two marks. The Kales were given three marks in a few cases, but these were not confirmed at the meeting at the Drill Hall. We think such should be the case, as the varieties should be brought to the next meeting and the awards made public, as only a few members of the committee can see the Chiswick work. Formerly fruit and vegetables, especially the latter, were always shown at Westminster after a Chiswick committee. Kales in a few cases at Chiswick were very badly diseased, and should certainly have another trial in land of a different nature.

**The weather in West Herts.**—A week of changeable weather as regards temperature. For instance, the highest reading in shade on the 4th was 43°, whereas on the 9th it reached 54°. In the previous sunny week the difference between the lowest night and highest day temperatures varied on several occasions considerable, but in the dull week just past the range was small, and one day amounted to only 3°. At 2 feet deep the temperature of the soil is now nearly 3°, and at 1 foot deep nearly 5° higher than the November average. Rain fell on the 8th, but only sufficient to wet the surface of the ground. No

measurable quantity of rain water has come through either percolation gauge for a fortnight, which is very unusual indeed at this time of year. The last six days have been very calm and gloomy.—E. M., *Berkhamsted*.

## NOTES OF THE WEEK.

**1 Chrysanthemum Robert Owen.**—This is ever a striking and noticeable variety, and such as must be included in every group by reason of its colour, distinctness of form and the like. It is one of the best kinds raised by the late Robert Owen.

**Pentstemons.**—A capital lot of seedlings of these brilliant border flowers was at the Drill Hall this week, the collection coming from Mr. C. F. Thompson, Llandaff. As a whole they were a good assortment of this useful plant, which near London has finished flowering long ago.

**Vitis heterophylla humulifolia.**—Some sprays of this pretty plant, accompanied by many clusters of the nearly blue berries from Mr. A. Kingsmill, Harrow Weald, were among the most interesting exhibits at the Drill Hall this week, the plant rarely fruiting with such freedom.

**Wallflower Parisian Early.**—A basket of plants of this ever-welcome flower obtained an award of merit this week from the Royal Horticultural Society. The blossoms are nearly yellow and the fragrance remarkable. The exhibit, which came from Messrs. Veitch, attracted a good deal of attention.

**Begonia coccinea.**—This is a capital kind for growing in the large greenhouse or conservatory, where it may display itself to advantage, and being both free in growth and flower also, is most effective when well established. The medium-sized flowers are produced in large drooping bunches and are very showy.

**Diplacus ruber** and another kind, *D. Jubilee*, were exhibited before the Royal Horticultural Society on the 9th inst. Both came from Messrs. Balchin, Hassocks, Sussex, the former being of a reddish hue and the latter orange-coloured—an improvement on the old species, which unfortunately is not grown so much as its merits justify.

**Anthurium Andreanum atropurpureum.**—The varietal name here indicated appears a little out of place in a flower, or, more correctly, a spathe of blood-crimson hue. Apart from this, however, the variety is a very effective one, the colour striking and the spathe bold and conspicuous on its long, erect stem of 2 feet high.

**Ornithogalum thyrsoides.**—The white-flowered variety of this species may now be seen at Kew, the blossoms large and clustered somewhat closely on a dense raceme. The scape, which is about 12 inches high, is stout and vigorous, the bulb being of the size of an ordinary Hyacinth. If obtainable in quantity, it would make a useful plant at this time for the greenhouse.

**Protea cynaoides elliptica.**—Some plants of this distinct shrub are now producing their handsome blossoms in the greenhouse at Kew. Though only small plants in pots, the blossoms are at least some 6 inches or 8 inches across. The large spreading heads with the rosy-tipped scales are very striking. The plants require a rather warm greenhouse and are natives of tropical South Africa.

**Cypripedium insigne.**—A very fine display of this old favourite is now to be seen in the entrance to the Orchid house at Kew, where large specimens in pans are freely covered with the useful flowers. Not only are the flowers of considerable service, for the plants also when hardly grown are especially valuable when well-flowered in the sitting-room, and make an agreeable change to the ordinary room plants.

**Trollius europæus.**—Some idea may be formed of the exceptional character of the season by a really good display of the flowers of this early summer plant during the present week. Flowering usually in May and June, we were somewhat surprised to see quite a large gathering of this Globe Flower at the Aquarium during the present week. The whole of the plants are not blooming, but merely a few, and these it will be interesting to note at the usual flowering next spring.

**Primula Poissoni.**—If the term perpetual-flowering could be at all applied to any hardy species of Primula, this one should certainly prove worthy of the distinction, seeing that the plants

have flowered almost unceasingly for months in succession. It is possible that in the low and somewhat sheltered position the plants find a uniform condition of heat and moisture at once congenial to their well-being, and in such the flowering goes on continuously. A good deep soil with some shelter is clearly what the plant delights in.

**Heliophila scandens.**—There is an exceptional charm in this pretty climbing plant not usually seen among cool greenhouse subjects. The plant is not only neat in foliage, but very pretty in the dull days of winter with its abundance of pure white blossoms. It is a member of the Cruciferae, as may readily be seen, and among the most free-flowering of its race. The species is of quite easy culture in sandy loam and peat, and in positions where freedom at the root may be given it would make a very effective climber for the greenhouse.

**Carnation Matthews' Winter Red.**—A group of plants of this variety came before the Royal Horticultural Society on Tuesday last. The weather at the time was fatal to the Carnation, and many kinds shrivel completely under its poisoning influence. The flowers of this variety did not appear to suffer so much in this respect, and should they be proof against fog they would be useful. The reddish blossoms are of medium size, and in the plants referred to not numerous. Larger plants would in all probability be more freely flowered.

**Vanda cœrulea.**—I send you two or three blooms of *Vanda cœrulea*. I bought about eighteen months ago three small imported pieces, I wired them round a small block and inserted the block in a 10-inch basket, and they have done remarkably well. Last autumn I had two small spikes; this year I have had four splendid spikes, and should have had five, but one met with an accident.—J. D., *Fanfall Park Gardens, Broomsgrove, Worcester*.

\* \* The flowers are of good size, but too starry and lacking in colour.—Ed.

**Aster turbinellus.**—Though scarcely a showy kind, as this term is understood among the perennial Asters generally, it is, notwithstanding, a most graceful and pretty variety when seen in fair-sized clumps. But even here if we would have all its beauty it should be allowed a good deal of its own way, as any attempt to tie it up would most effectually stifle all the grace and beauty of the blossoms on their long, slender, almost delicate stems. It is, however, not a delicate plant. In the rock garden it is a capital plant allowed to have its way, and equally pleasing and effective when well grown in pots in the greenhouse.

**Chrysanthemum Silk Twist.**—So far as novelty is concerned in this extensive group of autumn flowers, the above variety is perhaps the most peculiar. This is so as much in the quaint thread-like florets, that doubtless suggested the name, as in the general form of the flowers. In the colour, which is of a creamy white, there is nothing to attract, but the general formation of the flower-heads is novel. The variety is of the small-flowered section, and, so far as size alone is concerned, partakes of the hybrid pompon class, with which, however, the erect bristle-like florets have nothing in common. In a cut state the effect is very distinct, the variety associating well with flowers in general.

**In South Devonshire on November 1** the following were in bloom: *Lonicera sempervirens*, *Escallonia rubra*, *Coronilla glauca*, yellow *Marguerite*, white *Marguerite*, *Nicotiana glauca*, *Geraniums* (various), *Abutilon vexillarium*, *Phlox* (perennial), *Jasminum nudiflorum*, *Montbretia crocosmiflora*, *M. aurea*, *Rosa rugiflora* in fruit, *Rose Mme. Berard*, *Rose Souvenir de la Malmaison*, *Violet The Czar*, *Neapolitan Violet*, double white *Violet*, *Michaelmas Daisies* (several), *Chrysanthemums* (various), *Delphiniums* (several), *Pyrethrums* (several), *Puehsias*, *Petunias*, *Carnations*, *Heliotropes*, wild *Strawberries* in flower and fruit, *Verbena venosa*, *Schizostylis coccinea*, *Pentstemon*

mons (several), Dahlias (various), Aloysia citriodora, Rose Gloire de Dijon, Abelia floribunda, and Lavatera trimestris. In a neighbour's garden were also Macartney Rose, Caryopteris mastacanthus, and Cyclamen europæum.—W. T., *Bishop's Teignton*.

**The Cosmos.**—In last week's GARDEN you mention that varieties of Cosmos are blooming at Cork. I may state that at Clevedon these plants are beautifully in flower, and had it not been for a heavy wind a short time back breaking the head of the tallest plant, it would have been fully 5 feet to 6 feet. As it is, the others are about 4 feet to 5 feet in height. Our climate is such that it is only in an exceptionally severe winter that Solanum jasminoides succumbs, whilst the white Vine-leaved Abutilon I have had in the open for nine or ten years, also the New Zealand Flax.—A. B. TRESTRAIL, *Southdale, Clevedon*.

**Peristrophe speciosa.**—To many readers this useful species will be better known as *Justicia speciosa*, though in more recent years the plant has not received so much attention as formerly. As a pot plant for the greenhouse in winter, it flowers over a lengthened period, and this, combined with a bushy, compact habit, makes it a useful subject in greenhouse decoration. For this latter small plants in 5-inch or 6-inch pots may be easily grown in a few months, and these commence flowering in the earliest days of autumn. The blossoms are of a distinct shade of mauve-purple, over which appears a reddish violet tint that is most effective.

**Physalis Franchetti.**—This handsome plant promises to surpass the old Winter Cherry *P. Alkekengi* not only for its vigour and the striking effect in beds or the border, but more particularly in its hardiness. The old kind, though perfectly hardy at the root does not retain its foliage very far into the autumn; indeed, the plant loses its leaves almost as soon as the calyces have attained their colour. With the new comer it is different as the plants which are now loaded with the large coloured calyces have the foliage nearly as good as was the case weeks ago. An instance of the striking effect of the new species may still be seen in the herbaceous ground at Kew where two large beds have been devoted to it this year. These plants are still in excellent condition, while the old form a little distance away shed its leaves soon after the early frost. The greater vigour of the new kind as also its hardy character should render it among the most popular of garden plants.

**Tibouchina macrantha** is, for the moment at least, the most recently adopted or revised generic name of an extremely popular and showy plant that in the past has been known as *Pleroma*, and formerly as *Lasiandra*. This frequent alteration of the names of the more popular plants is to the gardener most confusing, because once it begins, the alterations appear at frequent intervals. The value of the plant, however, is the same, and its beauty still on a par with the old days, when as *Lasiandra* this fine old Brazilian shrub was known to most gardeners. There is no need to call attention to its beauty or its worth as a greenhouse shrub. It is not a climber in any sense, but a shrub of free and quick growth that quickly covers an allotted space on the interior of the greenhouse roof, and, there enjoying the full light and sunshine, produces in great abundance its large, deep saucer-shaped blossoms for many weeks in succession. The flowers, often 5 inches across, are of a deep violet-purple and very handsome. This species is also well suited to covering pillars, or it may be grown in pots in bush form.

**Connemara Heaths.**—The picture issued with THE GARDEN of October 30 is very charming, but their great value as autumn bloomers was omitted from all mention in the letterpress. Large beds here containing many thousands, which have been stopped twice during the summer, are now in the first days of November masses of beautiful flowers. The principle involved is that if you prevent a plant flowering at one time it endeavours to do so at another, and it is quite worth a little sacri-

fice to have a show so late in the season.—T. SMITH, *Neeray*.

\* \* \* This plant has been flowering all through the summer and is in bloom now on a bank fully exposed to the sun. Mr. Moon's drawing was made from the same plants of the white variety on June 15 of the present year. The soil is not peat, but a coolish loam on a hill facing the sun. No water is ever given other than what falls from the clouds, and the plants have withstood the droughts of recent years. There are good spikes now (November 9). The fine autumn may have helped to prolong the bloom, but, on the other hand, the drought was against the plant. In any case it is a remarkable instance of length of flowering, and charming flowers, too.—Ed.

## PUBLIC GARDENS.

**Open spaces.**—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., the Earl of Meath, chairman, presiding, a communication was read from the City Parochial Foundation consenting to the allocation of their open space grant of £1000 to the cost of laying out Bethnal Green parish churchyard, and to the provision of a drinking fountain therein, in accordance with the proposal of the Association made some time previously, and it was resolved to seek permission to erect a tablet in the ground, with a suitable inscription, as a record. It was also agreed to offer trees for planting in thoroughfares at Kensington, Calvert Avenue, Shoreditch and Hoxton Market, and to grant seats for South Grove, Camberwell, and De Beauvoir Square. The chairman reported the opening on the 1st inst. of a playground in Benbow Street, Deptford, secured and laid out by the Greenwich Board of Works, and provided with ample gymnastic apparatus by the association. Letters were read respecting the proposed acquisition for the public of Churchyard Bottom Wood, N., Pymmes Park, Edmonton, N., a part of Golder's Hill Estate, N.W., a site at Bromley, Kent, a burial-ground at Barking, E., Camberwell Churchyard, a cleared area in Islington and a plot of land in Ratcliff. It was also decided to see whether any steps could be taken, and, if so, what the cost would be to improve the churchyards of St. Nicholas and St. Paul's, Deptford, in order to render them more available as public gardens than at present.

### The Commissioners of Woods and Forests.

—The 75th report of the Commissioners of Woods and Forests has just been issued as a Parliamentary paper. The income derived from sales of forest produce in the New Forest amounted in the year 1896-97 to £7355 4s. 11d., in addition to certain surface rents amounting to £3099 11s. 8d., the corresponding receipts in 1895-96 being £7060 12s. 7d. and £3014 13s. respectively. In the case of Dean Forest the same sources of income produced £5305 17s. 7d. and £1156 12s. 11d., as against £6539 3s. 10d. and £1959 6s. 1d. in 1895-96. The mineral royalties of Dean Forest for the year ending March 31 last reached a total of £13,906 19s. 7d., as against £12,332 10s. 8d. for the preceding year. The greater part of the Oak woods, the report says, have arrived at an age when the income derived from their thinning may be expected to be less than heretofore for some time to come, and the system of management which was best when the Oak was grown specially for the purposes of the Navy requires reconsideration now that it is no longer devoted to the building of ships. It is suggested, therefore, that it is desirable to produce other kinds of timber for which there is a market, and to utilise the Oak already planted according to present-day requirements. Turning to other parts of the United Kingdom, the report states that Crown property in Scotland produced during the year an income of £24,737 16s. 1d., in Ireland £37,954 8s. 4d., consisting mainly of quit rents, in Wales

£15,107 12s. 1d., and in the Isle of Man £5654 7s. 5d.

### Royal Horticultural Society's awards.

The awards of medals to exhibitors at the Drill Hall on November 9 were, to say the least, very singular and inconsistent with those of the late meetings. A notable case of this occurred in the award to the cut *Chrysanthemums* staged by Mr. G. Wytbes, from Syon, a report of which will not doubt be found in its proper place. At the last meeting, a fortnight previous, for an exhibit of sixteen blooms in triplets, the award was a silver Banksian medal. On the occasion in question a similar award was made, the exhibit being more than treble the size of the former, comprising 250 blooms in 100 varieties. The setting up was most commendable in every sense, and quite an object-lesson as contrasted with the formal and orthodox fashion followed by most exhibitors. The quality of the flowers was excellent, the incurved section being well represented. True, in faking up or doctoring of the flowers had been followed, they being simply shown as grown and as they should be. The very least award that could fairly have been made was a silver Flo medal to this extensive exhibit. The other case was that of the Gros Colman Grapes from Mr. Iggulden, which were simply perfect examples in every sense, fine in berry, bunch, colour, and even flavour. Here the award undoubtedly ought to have been a silver Knightian medal.—ALPHA.

—One of the finest exhibits of *Chrysanthemums* ever staged at the Drill Hall came from Earl Percy's garden, Syon House. The exhibit was in fact made up of over 200 blooms, nearly 100 varieties, and occupied about 60 feet or 70 feet of tabling. The blossoms were of all sizes, with stems from 18 inches to 24 inches long, arranged in threes, stood out boldly and well, supported by splendid foliage of their own; amid groundwork of Maiden-hair Fern; graceful Palm forming the background. The exhibit was among the very finest I have seen, as, apart from its representative character, the flowers bore ample evidence of excellent culture. On Tuesday last was one of the few things to admire at the Drill Hall. It seems impossible to believe that the society has done its part by the award of a silver Banksian medal that it has thought fit to give to so handsome and well grown a collection. I do not in the least know who is responsible for an award so ill-considered and unjust; at the very moment, too, when every grower of *Chrysanthemums* had forsaken the society to go elsewhere. Surely the Royal Horticultural Society can afford to treat so staunch a supporter in this way for however desirous the council may be of rectifying such mistakes, errors of judgment, or whatever they may be, the sting of the slight remain. Indeed, it is one of those glaring mistakes that never should have happened, and which the Royal Horticultural Society in the future should avoid.—A FELLOW.

**Pears under glass.**—Will any reader tell me the best kind of glass-house in which to grow, in the north of England, cordou Pears planted out a trained like Vines, say, Doyenné du Comice a Josephine de Malines, and the best way to destroy prevent caterpillars?—X. Y. Z.

**Names of fruit.**—A. B.—Impossible to name from such a poor fruit and only one specimen seen.—J. R. Elliot.—Pears: 1, too far gone; 2, Chamois; 3, B. Clairgeau; 4, Doyenné du Comice; rotten.—Denton Park.—1, W. Bon Chrétien, second crop; 2, Beurré Bosc; 3, Catillac; 4, Beurré Charmeuse; 5, Maréchal de la Cour; 6, Autant Bergamot; 7, Pitmaston Duchess; 8, Beurré Doyenné; 9, Beurré Diel; 10, Beurré d'Anjou; Josephine de Malines; 12, Orange Bergamot. I have named all you send; we, however, only undertake to name four kinds in one week.—H. R. 1, Hollandbury; 2, Gloria Mundi.—W. J. Burston.—1, Beurré Diel; 2, Brown Beurré; 3, Josephine de Malines; 4, not recognised; should like to see good specimens.—W. J. P.—1, not recognised; 2, Scarlet Nonpareil; 3, Northern Greening; 4, M. de Ménage; 5, Ribston; 6, not recognised.

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## ORCHARD AND FRUIT GARDEN.

### DESTRUCTION OF INSECT PESTS.

THE autumn and the early part of winter offer a favourable opportunity for the destruction and prevention of future attacks of the various kinds of insects which infest fruit trees. The trees then being clear of foliage, every portion of wood can readily be reached, and much stronger solutions used than would be permissible when the trees are in a growing condition. When fruit trees are sprayed or washed at the season of the year indicated, it is astonishing the numbers of insects and their eggs which are destroyed. If persisted in year after year, spring and summer attacks are reduced to a minimum. Those who annually wash or spray their trees when dormant are rewarded for their pains by seeing them, if not altogether free from attack, certainly very much less infested than is the case where a let-alone policy is adopted. Spraying can now be done cheaply if the proper appliances are used, and any objection on the score of its being expensive will hardly hold good. The whole of the collection of fruit trees here, which is by means a small one, is sprayed in the winter by a comparatively small cost. The appliances are a force pump fixed in a galvanised cistern mounted on wheels, 20 feet of armoured hose, with a 6-foot branch pipe at the end on which is fitted a sprayer. A coarse or fine spray can be had simply by unscrewing or screwing the glass cap up tighter. An active intelligent man with a lad at the pump can spray a great number of trees in a day in a very efficient manner. The best time to perform this is directly after the trees are pruned, or as soon as the prunings and leaves are raked up and cleared away. Digging or pointing of borders and alleys should be deferred, on account of the person manipulating the sprayer having to walk round and to

pass backwards and forwards in front of the trees. Calm weather should be chosen, especially if insecticides of a caustic nature are used, so that the person applying them does not run the risk of having the spray blown into his face. Windy weather causes a waste, as the greater portion of the spray is carried away without ever touching the trees unless growing closely together.

Regarding insecticides, the following can be safely relied on as being the best for the purpose: Petroleum emulsion and a solution of caustic soda and crude potash. The petroleum emulsion is made in the following manner: Take from 4 lbs. to 6 lbs. soft soap, according to quality, 100 gallons of water, and bring it to boiling point. Then add 1 fluid oz. of petroleum for every gallon of water, boil for five minutes, and then draw or put out the fire. To prevent an accident occurring, the vessel in which the mixture is boiled must not be quite full, in case it should boil over and the petroleum catch fire. This may be used in a warm state and applied with a sprayer to ensure thorough diffusion of the petroleum, when it will injure neither wood nor buds. This is recommended when the trees have been badly infested during the previous season. The second is the more efficacious for winter use, as it cleanses the trees of all kinds of insects, it kills their eggs, and relieves the branches and stems of Moss and Lichen without injuring them in the slightest degree. This is made as follows: Take 1 lb. of caustic soda, 1 lb. crude potash, add 10 gallons of water, and boil until all is thoroughly dissolved. This should be used while warm; apply it with a sprayer, leather gloves being worn to prevent the mixture burning the hands.

Extra pains should be bestowed on trees infested with American blight, as spraying is not sufficient in itself to kill these insects, surrounded as they are with a cotton-like substance. A very strong solution well brushed into every affected part of the trees is an excellent remedy. To render this effective, every particle of loose bark should be cut away, so that the insects

can be more easily got at. The soil, too, under the trees should be removed down to the uppermost roots and burnt. If any of the insects are found on the roots, spray with petroleum emulsion and cover them with fresh soil from a non-infested source. Plum, Damson, and other fruit trees may also be washed over with a mixture of limewash, with enough soot added to tone it down and make it less conspicuous. This cleanses both stem and branch and renders the buds distasteful to birds, but I have never found it of any practical use for killing either insects or their eggs. This is also an excellent wash for Gooseberry and Currant bushes where birds are in the habit of disbudbing them. Freshly-slaked lime may be used instead of this wash for fruit trees, and it should be cast among the branches when moist either from rain or fog and on a calm day. For the destruction of the winter moth, grease banding, for which a special kind of grease and paper for wrapping round the stems can now be bought, is used. Cart-grease should be avoided, as it is apt to injure the stems of the trees. As the grease soon hardens from exposure to the air, it should be renewed or smeared over afresh every few days, or as often as is found necessary. This traps great numbers of the female winter moths when on the way up the stems for the purpose of laying their eggs, but it cannot be depended on for catching all of them, as the male oftentimes carries his mate with him at pairing time up to the branches.

All prunings, leaves and rubbish should be carefully raked up and charred at some spot remote from the trees, which will get rid of great numbers of these pests, also their eggs. The soil under the trees should also where possible be pointed over a few inches deep, and at once apply a dressing of freshly-slaked lime, which will kill any chrysalides or eggs there may be in it. In orchards the same kind of thing may be done for about a yard round the trees, and if poultry are kept and allowed to roam in them, the application of lime will be unne-

sary, as they soon make short work of both insects and chrysalides as they are turned up

A. W.

**Highly-coloured Apples.**—At Livermere Park recently I was much surprised at the very high colour of the dessert Apples just now. King of Pippins was very bright, the fruit large and symmetrical, evidently well grown. Court Pendu Plat, Cox's Orange Pippin, King of Tomkins County, and the good old Ribston were alike good in quality and handsome in appearance. The soil at Livermere is light and porous, and not apparently the best for Apple culture, but feeding from above and rational treatment of the growth conduce to the above result.—VISITOR.

**Pear Brown Beurre.**—This Pear can hardly be too much praised when gathered and stored in good condition. The tree grows vigorously and fruits freely on light soils, but in heavy, cold soils it is not so satisfactory. It appears to do well at Livermere, and I saw some very good fruits of it last week. It is large enough for all purposes, and the quality is excellent, the greenish, juicy flesh being good for weeks together. Another fine Pear that Mr. Tallack grows well and thinks very highly of is *Conseiller de la Cour*. This is ripe now, but keeps in good condition for a long time, the flesh being soft and good right to the core.—H. R.

**Stewing Pears.**—The best stewing Pears with me are *Catillac* and *Beurré Clairgeau*. The former never fails to produce a heavy and reliable crop, and is, moreover, the best flavoured stewing and keeping Pear I know of. Properly stewed it will keep for several years, and certainly improves the second year. *Beurré Clairgeau* is a good cropper, but its flavour is not equal to that of *Catillac*. *Black Worcester* is not very successful with me, and as to *Grosse Calvasse* I have two or three trees, but find them hardly worth growing even against a wall. *Uvedale's St. Germain* does fairly well, but is not to be compared in my garden with *Catillac*.—GWENT.

**Digging around fruit trees.**—The time is now at hand when the pruning of fruit trees and bushes having been done, digging amongst them will be proceeded with, and from a long and careful study of the matter I am convinced that digging with a spade is responsible for many of the ills that fruit trees suffer from, from the fact that the fibrous surface roots are cut off or broken, while the large, deep-rooting ones that promote a gross watery growth are left. Although I have long since discarded the spade, I am compelled to use in its place the steel fork, which is doubtless the most useful for loosening and pulverising the soil without mutilating the roots. At this time of year all the old mulching materials that can be spared for the fruit tree quarters are forked in and left in a rough state during the winter, and then in spring when the drying winds begin to rob the earth of its moisture, the soil is raked down fine again. Nothing I have yet tried for counteracting drought is so effective as frequent surface-stirring.—JAMES GROOM, *Gosport*.

**Liquid manure for fruit trees.**—The exceptionally dry spell, lasting for many weeks in succession, is in such direct contrast to the autumns of several preceding years that it makes even old practitioners alter their usual routine of work. Seldom do I remember having to use the water-pot so much at so late a period of the year. When one finds the soil around fruit trees dust-dry before the fruit-buds are fully plumped up, it is quite time to set about supplying the deficient moisture if full crops are looked for next year. The roots that supply the fruit-buds most directly with what they need are undoubtedly those that are near the surface, and it is, therefore, of the utmost importance that these should not lack moisture. This is the time when a good soaking of liquid manure of some kind can be supplied with the greatest advantage. Anyone having drainage of any kind that has manurial elements in it will do well to apply it without

delay to fruit trees of all kinds, wall trees in particular. Failing manure water, some kind of artificial manure should be spread over the roots and washed in with copious supplies of clear water.—J. G., *Gosport*.

**Strawberries.**—With, I know, many others I am much pleased at the great interest which THE GARDEN is taking in seeking information in regard to Strawberry cultivation. I have in Monmouthshire two large private gardens, and I somewhat extensively cultivate this fruit both under glass and in the open garden. Under glass with me the first on the list is *Royal Sovereign*, followed by *Vicomtesse Héricart de Thury*, *Stevens' Wonder*, and *Scarlet Queen*. Noble I have, after many trials, discarded, indoors and out. Early, prolific, and fine looking it certainly is, but tasteless and not worth growing for that reason. With regard to outdoor culture I give preference to *Royal Sovereign*, *Vicomtesse*, and *President* as the best early sorts, whilst among the late ones nothing equals *Latest of All*, *Waterloo*, and *British Queen*. I break up, as a rule, all my beds after four years, but am not sure that three years would not answer better, unless specially well attended to. September and October are the best months for this work. The forced plants I plant out in July on well-prepared ground, watching for a fall of rain when so doing, so as to establish the roots as quickly as possible, mulching them early in November.—GWENT.

**Pear Bishop's Thumb.**—This is a very useful Pear just now, and though possibly the flesh is not so rich and buttery as that of other kinds now ripe, there is a brisk and pleasant flavour not easily beaten. I had usually looked upon it as a somewhat dull-looking, but good-quality fruit—one of those kinds that improve on acquaintance, but looking through the fruit room at Livermere recently Mr. Tallack showed me fruit of a rich and bright colour, that could only be the produce of well-cultivated trees. So bright, in fact, were the fruits that, although I am sending the same variety to table, I did not recognise it. When pressed as to the cause of the high colour, Mr. Tallack somewhat laconically replied, gas-lime, but I am inclined to think that the free method of training practised at Livermere has a good deal to do with the satisfactory results. Where every bit of young wood is ruthlessly cut back every season how can the trees give good results. Several old trees in this garden that had for years been so treated I have allowed to grow freely since taking charge some three years ago, and this season for the first time I had a crop of large and good fruit from them. If more freedom of growth were allowed and this thinned early in the season, there would be far less need of root-pruning.—R.

#### A NEW WHITE GRAPE.

WERE there a distinct paucity of white Grapes in commerce, we might, perhaps, have some tangible reason for welcoming a new one, but on what grounds a majority of the fruit committee did at a recent meeting grant an award of merit to the new Grape *Marchioness of Downshire* it would be difficult to determine, especially when such an award was made in opposition to the judgment of the best authority on Grapes in the kingdom. The new variety may claim the merit of being a spoilt Muscat of Alexandria. The raiser crossed that variety with white *Gros Colman*, doubtless in the hope of throwing some Muscat flavour into the latter, which seems to have been so poor a Grape that no one has cared to grow it. Even the black *Gros Colman* is a tolerated Grape because of the size of its berries and the weight per rod it produces to the market grower. On the score of flavour it ranks amongst the lowest. Now with respect to the samples shown at the Drill Hall recently, either the Muscat flavour which it is professed has been imparted to the seedling is distinctly wanting or else the Irish climate has entirely failed to impart it. Certainly on the bunches sent for tasting the berries were of Muscat size and shape, wanting colour, and the

flavour or quality of the most moderate kind. What, then, has been gained to Grape culture by the introduction of such a variety? Amongst the white Grapes we have in commerce now are *White Nice*, *Foster's Seedling*, *Mrs. Pearson*, *Duke Buccleuch*, *Golden Champion*, *Chasselas Napoleon*, *Lady Hutt*, *White Gros Colman*, *Dr. Hogg* and others, yet how few of these are in general cultivation. What object is there in putting any more indifferent varieties into commerce? Why cannot we have a trial of new Grapes at Chiswick before granting any award? Realising the granting of such recommendations to standards of fruits of this description is a very serious matter and if another failure should ultimately be recorded, what becomes of the reputation of the fruit committee? Here is a Grape getting an award without any knowledge by the committee of its habit or its cropping. It is indeed a veritable leap in the dark, and remembrance of how many white Grapes had previously obtained awards, and yet have become almost general failures, might well make those empowered to grant certificates careful how they commit themselves. A most useful object-lesson in Grape values was furnished at the same meeting in the wonderfully fine and varied collection of Grapes shown by Mr. Bayer, of Forest Hill, in thirty varieties. There were but three white Grapes in the collection, and of these the best was *Muscata of Alexandria*. A. D.

**Watering fruit trees.**—The weather has been so exceptionally dry, that watering of wall fruit trees has been necessary much later than usual. Fine, dry autumn weather is usually looked upon as favourable to the ripening and developing of fruit-buds, and, unquestionably it is, so as long as the roots are kept moist, but when the rainfall is low and a much greater amount of sun than usual is recorded in October it is not altogether an unmixed blessing. During the past fortnight I have been busy planting spring flowers, and the dry state of the borders and beds led to an examination of the fruit borders, with the result that they have had thorough soaking of water. Fine weather is one factor in the well-being of trees just now, but moisture at the root is a much more important one. Without it the roots cannot carry out their functions, and that it is necessary is proved by the free emission of roots during September and October. Provided the branches and spurs of fruit trees are judiciously thinned so that air can play freely about them, the grower need not fear what the weather does, and though it seems strange, perhaps, to some, I have no doubt that trees allowed to take care of themselves will develop their buds in a wet, unless autumn moisture better than in a dry one, when the roots cannot find sufficient moisture.—H.

**Vine sports.**—The interesting Muscat of Alexandria sport at Chiswick exhibited its variation last year in producing on an outer rod of a Vine at the west end of the house and some 8 ft from the ground a weak lateral and a small bar of exceedingly large-berried Grapes. The wood, however, was too weak to give eyes. This spring the new break was stronger, and the result I believe a lateral just a little stouter than are the near lower laterals on the Vine, with leaflets deeply lacinated, more so than is the ordinary leafage. The bunch produced was rather larger than that of last year, but the berries again were very fine, oval, and clear as well as very firm. Really they presented all the well-known size and form as well as flesh and flavour of the Cannon Hall Muscat, but seem to have been presented here, in a comparatively cool house both last and the present years, very free-setting qualities. The present wood is stout enough to furnish several good eyes, and therefore we must not have to wait long ere seeing independent plants fruiting both in pots and planted out. Should then all the present sportive or divergent features be maintained, even if in the end it does not prove to be distinct from the Cannon Hall

There will be furnished absolute proof that Vines can and do sport. The Vine on which the sport appeared is probably one originally planted in 1857, when the great viney was first transferred to its present uses. That was forty years ago. It seems, therefore, all the more singular that so long a period should have elapsed ere this abnormal form was generated. It would be interesting to learn whether other *bond-fide* sports are within the knowledge of readers.—A. D.

**Apple Mabbot's Pearmain.**—I noticed this excellent variety at Chiswick Gardens, and at the Able Congress in 1883 it was well shown. My fruits this year lack size, as the soil was so dry though the summer months. In the west of England I used to get very good fruits from standard trees. I have grown it since in bush form only, and it is a good cropper, the fruits keeping firm well into the new year. It may rightly be classed as a midseason dessert Apple, the fruits medium sized, orange yellow, streaked with red.—G. W.

**Pear Beurre Baltet pere.**—I am glad to see this Pear receive favourable mention at the hands of Mr. Wythes, and I quite agree with all that he has to say in its favour. I have it in cordon form only, and it leaves nothing to be desired either in size of fruit, cropping qualities, or flavour. My trees are on the Quince stock, but they make excellent growth, and produce an abundance of fine buds. Mr. Wythes mentions that it succeeds well on an east wall with him, but I am afraid that it would lack flavour on our deep blinding loam if grown in such a position. Some magnificent fruits of this Pear were exhibited at the Hereford fruit show in 1896, but this year they were neither so plentiful nor quite so fine.—A. W.

**Pear Fondante de Thirriott.**—This is one of the best Pears this season, and deserving of a name. Probably the flavour may not suit all palates. It is distinct from that of many of our autumn Pears, but a flavour many like. The fruits are very juicy and very refreshing. I need there was an excellent dish of this variety at the Crystal Palace, Mr. Woodward having sent me some. It promises to make a valuable exhibition Pear, being a good cropper and of excellent quality. With me it does well as a cordoned. My trees are on the Quince, and I have found the best flavoured fruits are obtained from trees on this stock. Trees in bush form on the Pear free stock produce later fruits. This is a gain, as we have no lack of October Pears. I saw this variety good at Christmas grown in heavy loam in bush form on the free stock in the eastern part of the country, and it was thought much of, but rarely failed to crop.—G. W. S.

**Grapes at autumn shows.**—I have this season found Grapes lacking the usual good qualities to be seen. At a recent show only two competitors were entered for the prizes offered, and the Grapes were not worth second place, though the prizes were good. What can be the cause of the scarcity? The October weather should have been favourable, and there was no lack of sun to finish late Grapes. I also notice that more second-rate varieties are now staged than formerly. This is to be regretted, as although they have size and a nice look at, there is a lack of quality. The other day judging with one of our very best fruit growers I was pleased to see the standard made for quality; size had no charm for him. We have excellent Grapes which take up the show room as poorer ones. I admit they may need better culture, but this should not deter growers from growing those noted for quality in preference to mere size. For market, size may be valued, but even then quality commands the best price.—B. M.

**Apple Allen's Everlasting at Brighton.**—This above variety is not so much grown as it deserves, but it is meritorious on account of its excellent keeping properties. I admit it is not so striking in appearance as some, and in these days, to gain favour, those fruits with bright colour or good size have the preference. This variety

will be good next May, given cool storage, at a season there are very few Apples, at least scarcely any equal in flavour to this. I recently saw some very fine fruits of this variety at Brighton, and was told that it did grandly on the chalk. Its compact growth should make it a favourite. It did well with me when in Gloucestershire on limestone, but is less prolific in Middlesex. On the other hand, we cannot expect good results in pear, very shallow soil resting on gravel. It is a distinct fruit, somewhat flattened, and in places where it grows freely the fruits are quite medium-sized, of a bronzy green, very firm, and of a good shape.—G. WYTHES.

**Pear Lucy Grieve.**—A little-known Pear and one seldom met with owing, no doubt, to the tree being a shy bearer. I have a tree of it as a pyramid, and although it has been planted some ten years I have never been able to gather a good crop of fruit from it. This season the tree certainly bore more fruits than ever it has done before, but it could not be termed a full crop. The individual fruits were also finer than usual, and the quality was first-rate. Wasps, hornets, and tomatoes are exceedingly fond of this Pear while quite green and hard, and if left unprotected they soon spoil the fruit. The fruits ripen during October, and are very highly flavoured. The bark of the tree is conspicuous on account of its dark-looking, rugged appearance. It is but a medium grower with me, and produces an abundance of fruiting spurs. Perhaps it would do better on the free stock and allowed to grow unrestricted. Has any reader of THE GARDEN grown it in this way?—A. W.

**Apple Jas. Grieve.**—I am much obliged to Mr. Parker (p. 356) for his note on the above, and my note (p. 316) should have read, "The variety in question is not unlike Cox's Orange in size and in habit. It differs in growth and is a softer fruit." Mr. Parker's note coincides with my own respecting its good qualities. I am aware it is a much earlier fruit than Cox's, and I should not have been far wrong if I had described it as a good late September or October Cox's Orange. After October it is not so good. Fruits from the trees on the Paradise stock are of good quality, and there is more colour in my fruit than in Cox's Orange. Like the last-named, it fruits freely and is not a gross grower. I am pleased to note Mr. Parker speaks highly of its cropping; in this respect it is superior to many. I noticed this variety fruited so freely in a small state that I was induced to give it a trial. I have only small trees, but they carried a nice crop, of good quality and appearance.—G. WYTHES.

\* \* \* The fruits sent by Mr. Wythes were far more highly coloured than those sent by Mr. Parker, this, no doubt, owing to the locality in which they were grown (Middlesex), Mr. Parker's having been grown in Scotland.—Ed.

**Autumn Pears.**—I was very glad to notice that Thompson's had secured the "flavour prize" at a recent meeting because it is a Pear of excellent constitution and also a free cropper, although from a quality standpoint it would seem to vary considerably. I remember a few seasons ago a writer asserting that with him it was not even second-rate. That the quality of Pears will, however, vary with the season quite as much as from different soils is apparent. I noted recently that this year for the first time Marie Louise d'Uccle was very fair indeed, so also is Beurré Bachelier; on the other hand, two Pears that, as a rule, are thoroughly reliable, Beurré Superfin and Van Mons Leon le Clerc are nothing like up to their usual standard. These, however, it must be added, are from old trees. Beurré Diel, also from old trees, is useless, except for stewing, but the same variety from cordons is very good. Writing of this Pear in connection with dessert reminds me of a dish I saw a fortnight ago at a show in a collection of four dishes of fruit as green as a Leek, and, saving a withered appearance from premature gathering, as hard as a bullet. Surely fruit should at least be in fair form when shown in a collection available for dessert. Two useful Pears at the present

time are Gansel's Bergamot and Passe Colmar, the former from a very old tree, the latter from cordons. Passe Colmar is a great and consistent cropper and keeps well; it does not come so large as I remember it on the heavy Sussex loam, neither does it merit the description of "a highly flavoured Pear" given in some catalogues; it is, however, refreshing and probably one of the most juicy Pears in cultivation. Nouvelle Fulvie came in earlier than usual. This, too, is small with me, but a good little Pear that crops well. Perhaps some reader of THE GARDEN may be able to tell us something of Duc de Nemours, from a show standpoint one of the very finest November Pears. I have only seen it at one place (Pains Hill), and here it is said to crop well and to be in its season one of the best dessert Pears. Why is Winter Nelis so susceptible to American blight? Several cases have come under my notice of fine old trees that have to be annually treated for this when other Pears are quite exempt.—E. BURRELL, *Claremont.*

#### SHORT NOTES.—FRUIT.

**The Vierlander Strawberry.**—This Strawberry is peculiar to a marshy district in the immediate neighbourhood of Hamburg. The fruit is very aromatic and nearest to the wild Strawberry, and some prefer it to any other sort. Unfortunately, the fruit will not keep, and under some conditions it has lost its taste and appearance after twenty-four hours.—ROB. M. SLOMAN.

**Apple Wheeler's Russet.**—This Apple is very conspicuous at this time of year by its peculiar grey russet appearance, which, however, assumes a slightly yellowish tint when the fruits are ripe. Like most of the other varieties belonging to this section, it possesses good keeping qualities. This combined with its rich flavour renders it a valuable sort for late use. The tree is a medium grower, and therefore suitable for garden culture.—S. E. P.

**Apple Wormsley Grange Pippin.**—At the fruit and Chrysanthemum show recently held at Hereford a very fine dish of this Apple was included in the first prize collection of thirty dishes of Apples exhibited by Mr. Lee Campbell, of Glewston Court, Ross. These fruits were faultless both in form and colouring. It was the finest dish of this variety that I have ever seen. It is a pity that Wormsley Pippin is not more often met with, as it is an excellent November Apple, good alike for dessert and cooking. It is a good cropper and a hardy, free grower, succeeding equally well as a bush on the Paradise as when grown as a standard in the orchard.—A. W.

## STOVE AND GREENHOUSE.

### TREE CARNATIONS.

THE exceptionally mild weather we have experienced during the autumn has been favourable to these where plenty of air has been given. I find among those whose experience is limited there is a great tendency to give too much heat and not enough air. Carnations cannot be forced into flower at midwinter. They must have been previously grown on so that buds are well formed during the autumn. It is rather difficult with a limited number of plants to ensure having good blooms at any particular date, but it is easier to retard them than to force them on. When we are getting bright sunny weather, extra heat with plenty of air will do no harm, and in dull, heavy weather the cooler they are kept the better. There are now many varieties included under what are called "perpetuals," but none of these keep up a succession of flowers on the same plants, though good blooms may be had throughout the year by growing on a succession of young stock and stopping the plants at different intervals. Some sorts branch out and keep up a succession much longer than others. Winter Cheer is perhaps the nearest to what may be termed "perpetual." Planted out, [J

have seen the same plants continue to flower for months together. Uriah Pike has several times been in dispute with regard to its claim to being a perpetual. My experience is that plants propagated in the spring and grown on with others will flower from the main stem during the autumn, but under any conditions the side shoots cannot be induced to start away for bloom until the following spring, while with others I have had the same plants flower five times in one year. When I first saw Mrs. Leopold de Rothschild (or Mme. Thérèse Franco) I had my doubts about it keeping up its character, the growths being very thin. However, after growing it several seasons I can speak well in its favour; the growth and blooms have improved rather than deteriorated. We are badly in want of a really good white. Although we have such fine varieties for summer flowering, it is difficult to find one that will bloom really well in winter. Mrs. Moore was a favourite, but I have not seen it doing well during the last year or two. La Neige is very free, but the flowers are small and the growth thin.

Since the advent of Uriah Pike, crimsons have become numerous. The latest addition I have met with is Countess of Warwick; this is very dwarf in habit, with flowers of a bright claret-crimson, the broad, smooth petals of good substance. It is a seedling from Winter Cheer, and seems likely to make a good companion to that useful variety. Of yellows, Primrose Day has flowered better during the winter than any other variety I have tried, though it cannot be regarded as a perpetual, for, like Uriah Pike, the side shoots will not start until the spring. Two-year-old plants will flower best. I find the flowers are more inclined to burst than when I first grew it. Miss Audrey Campbell is a fine yellow for spring flowering. Grown in pots and kept in a cool pit during the winter and taken into a light, warm house early in the year, the plants soon throw up bloom. A.

*Salvia splendens grandiflora.*—I can quite agree with "H. P.'s" note on p. 337 respecting this bright and effective plant. I noted it a few days since in Mr. Bull's nursery, and was much attracted by the brilliant colour and large size of the spikes of blossoms. Many of these *Salvias* are of great value in keeping up a display of bright effective colour in greenhouses and conservatories during the autumn, but so ubiquitous is the *Chrysanthemum*, that many gardeners nowadays hardly know what a *Salvia* is. Such a bright and beautiful kind as this should ring the genus into greater favour.—H.

*The yellow Calla.*—I confess to a certain amount of disappointment when I see from time to time fine specimens of the yellow *Calla* exhibited. As I understood that the beautiful *R. Pentlandi* could be grown in a cool house, I was tempted to try it. Had I known what I do now, I might have saved myself the trouble, for, though very similar in appearance to the common white *Arum*, it comes from a different and warmer part of Africa, the Orange Free State, and so requires a higher temperature than I can give it. The brother of a gentleman who introduced it some time ago told me that in its native habitat it was to be obtained in quantity.—D.

*Drosera dichotoma.*—The Sundews are an interesting family of plants, and the larger section of the genus as represented by the species above-named may with advantage be grown by those having a warm, moist house at disposal. It is an easily grown species, thriving well in pots or baskets or on a bed of *Sphagnum Moss*. It is propagated in various ways, as by seed, division of the roots, and it may also be grown by cutting the roots into small pieces and laying these in pots or pans of peat and Moss. A moist atmo-

sphere is of more importance than much water at the roots, and fumigation must never be allowed in the house where Sundews are grown.

#### NEPENTHES AT KEW.

PROBABLY no other group of plants among the many of importance grown under glass in the Royal Gardens at Kew excites so much interest among the visitors as the rich collection of Pitcher Plants. Great as has been the interest displayed in these plants hitherto, this is now more likely to be increased. Formerly all the plants were suspended in the warm section of the No. 7 range adjoining the Victoria house. Here, however, these *Nepenthes* were associated with a rather full collection of flowering and fine-foliaged plants, where, by reason of the loftiness of the structure, a large number could not be properly seen. Happily, however, all this is changed and the *Nepenthes* have a new home. More than this, all who are interested may now view the plants with perfect ease, the majority being suspended within 5 feet or 6 feet of the ground. The present home of the plants adjoins the old one, a house entered from the stove, as also from the Victoria house. In the present structure no staging of any kind exists; the house is span-roofed, and perhaps not more than 12 feet wide inside walls. A kerbed pathway runs through the centre and abundance of light and heat is provided. The plants, growing in baskets, are suspended to the rafters in two long lines on either side the path, and the back row, alternating with the front, assists the uninterrupted view of all. The arrangement is simple, but withal so effectual both for observing the plants and for the latter receiving the fullest light and attention. On the floor, by way of relief, specimen fine-foliaged plants suited to the heat and moisture are arranged, the fine crop of pitchers hanging immediately above. No doubt the plants will derive benefit from the improved condition of their surroundings. In any case the fact must not be lost sight of by those gardeners who perforce must still grow them in mixed plant stoves, that these plants, many of them fine examples of their kind, have attained their present fine proportions in a mixed plant house in these gardens, which with the *Nepenthes* added was certainly unduly crowded. For it is not improbable that *Nepenthes* may in the near future be more largely employed in the decoration of the mansion or dwelling house. Their use within the dwelling could have no other than a unique effect, provided of course a good crop of well-coloured pitchers was upon the plants at the time. Take for instance one such as a central object on the dinner table or upon a marble pedestal or column, or, indeed, in any position where the pitchers may droop to advantage, these things would at once attract by their picturesque bearing. And then the remarkable variety of the plants themselves and their beautiful and richly-coloured pitchers are ever attractive when the plants are at their best. At Kew at the present time such fine kinds as *Northiana* have many splendid pitchers, so also *Morgana*, *Mastersiana*, *Stewarti*, *Hookeriana*, *mixta*, *Sedeni rubra*, and the handsome *Amesiana*. Others equally good are *Dicksoni*, *Williamsi*, *Curtisi*, *Lindleyana*, *Dominicana*, *edinesis*, *Rafflesiana*, *Wrigleyana*, *Kennedyana*, and many more. In some kinds the pitchers droop to a considerable length; in others they cluster just below the basket, or scarcely this, as in *N. phyllanthiflora*, a kind with small greenish pitchers. E. J.

*Rust on Malmaison Carnations.*—"J. R." on page 260 says he is much troubled with rust on his Malmaison Carnations. As I grow about 200 in pots and have had trouble with rust, I will give my treatment of them. I find they require the greatest care and attention possible in the matter of watering. The plants are potted in good sound fibrous loam, leaf-mould, and silver sand. No manure is necessary until they are

showing bloom, when a little weak liquid manure is beneficial. I give just sufficient fire-heat to keep out frost, plenty of air day and night, even in very severe weather or when cutting w prevails. After they have done flowering I set them out of doors until the middle of September when they are taken into the greenhouse. In three years long enough to keep them, as at the second year the plants begin to get leggy and the flowers from old plants are not so good as those from younger ones. The old plants planted out in a cold frame as soon as they have done blooming, and layered in the usual way some nice soil. When they are rooted sufficient for lifting they are put into well-drained pots, stood in a frame and kept close and shaded for a few days. When they are established they are treated like the older plants.—J. W. JACK *Rotherby Hall, Leicester.*

*Heliconia illustris rubricaulis.*—This *Heliconia*, which is illustrated on page 359, is an ornamental fine-foliaged subject when in flower, but at the same time it is particularly liable to lose a great deal of the bright-tinted veining which forms its most attractive feature if a rich potting compost is used or the plant is fed liberally with liquid manure, it will disappear, but much of the bright colouring will disappear. A mixture of loam, peat, and sand will suit it well, and overpotting should always be guarded against, for it colours better when somewhat pot-bound. It is essentially a stove plant and it should be shaded from bright sun during the summer months. This *Heliconia* readily increased by division, but at the same time I find that if this is carried out in the latter part of the summer or in autumn it is difficult to keep the plant in good health during the winter; therefore division is best performed in the spring or early summer. At this time of year the plant should be kept moderately dry in an atmosphere not too much saturated with moisture, otherwise the leaves are apt to become discoloured. This is particularly liable to happen if the temperature at any time is allowed to get rather low. The golden-veined *H. aureo-striata* which is a much older plant than the preceding forms a good companion to it and needs equal careful cultivation. Much the same treatment may be given it as recommended for the other.—H. P.

*Notes from Ireland.*—I went round the borders and beds to-day and made a note of the plants still in flower and those which are flowering prematurely. The thermometer to-day (November 8) in the shade registered 57°; in the open air exposed to a moderate breeze, 75°, which may account for many of the spring plants being in bloom. The following are in flower, many of them as gay as at any time during summer: *Achillea* in variety, *Acanthus Candelabrum*, *Aubrieta*, *Leichtlini*, *Antirrhinum* in variety, *Mirabilis*, *Jalapa*, *Carnations*, *Roses* in variety, *Pentstemon*, *Geraniums*, *Gladioli*, *Veronicas*, *Salvia patens*, *Kniphofias*, *Agapanthus umbellatus*, *Calceolarias*, *amplexicaulis*, *Commelina celestis*, *Asters*, *Lupinus*, *Violas*, *Anemone japonica*, *Mimulus*, *Pyrethrum*, *Aconite*, *Fuchsias*, *Marguerites*, *Lobelias*, *Gaildreas*, *Tradescantia virginica*, *Polyanthus*, *Veronica*, *Nicotiana glauca*, *Solanums*, *Campanula*, *Chrysanthemums*, *Cheiranthus*, *Senecio pulchellus*, *Sedum spectabile*, *Phloxes* in variety, *Heliotrope*, *Helianthus*, *Doronicums*, *Schizostemone*, *Polygonum Brunonis*, *Clematis*, *Chelidonium*, *Phygelius capensis*, *Hydrangea*, *Monarda*, *Viola*, *Rudbeckia Newmanii*, *Spiraea*, *Pampas*, *Grass*, *Hypericum*, *Jasminum nudiflorum*, *Tropeolums*, *Malva moschata* alba, *Eurotia speciosa*, *Passiflora edulis*, *Primula*, *The Lady*, *Heaths* in variety, *Myosotis*, *Oxalis*, *rosea*, and *Mignonette*. Many of the things here enumerated would have been long since over for the unusually wet and cold summer. As *Ericoides*, which should naturally flower early in October, is not yet fully expanded.—T. See *Ashford, Cong.*

ST. MARGARET'S.

The house of St. Margaret's is supposed to be from the fourteenth century, having originally been a convent in connection with "the ancienne Abbaye of Tichefelde." It formed part of the estate of the celebrated Thomas Wriothesley, first Earl of Southampton, and eventually passed into the hands of the Delmé family, whose descendants are the present owners. Many parts of the building attest to its antiquity, while a stone bench led into the wall of one of the rooms in the tower suggests ideas of the discipline which may have prevailed during the régime of the fair and sainted mother superior from whom the mansion takes its name.

The house is of red brick, very picturesque. It is completely covered with flowering plants, creepers, &c. An immense Magnolia

are always dry and far more pleasant and springy than is hard-rolled gravel. With an ordinary lawn mower grass walks are easily kept neat, indeed, they give much less trouble in sweeping and rolling than gravel walks do.—A. D.

FLOWER GARDEN.

POLYGONUM SPHEROSTACHYUM AND ASTER DIPLOSTICHOIDES.

SHORT notes on the plants bearing these long names appeared recently in THE GARDEN (pp. 373-374). I ask to be allowed to say a few words about each of them. First I find that the highest and most recent authorities are not agreed as to the correct name of the Polygonum. Hooker's "Flora of British India" gives *P. spherostachyum*, which is the name adopted in the "Kew Hand-List," but "Index Kewensis"

but even then the rearing is no easier. I have also tried covering them with peat soil where they fall round the parent plant, with no better success. The species seems to do best in rather shady places and moist peat, but it may be doubted whether as a garden ornament it repays the trouble of rearing. A good variety of *P. amplexicaule* if grown in dry and poor soil is as bright in colour, though less compact in growth. Another kindred species, *P. affine*, though the colour is not so conspicuous, is far more easy to manage, and has qualities which make it more desirable as a garden plant.

The Aster with the long name I raised from the same lot of Himalayan seeds as the Polygonum. The plants, which were few, flowered and died, and I set it down as a biennial, though I now know that it ought to be perennial. Up to this time I have heard of only one garden where it flourishes with real vigour, and that is high in the Peak of Derbyshire. I refrain from indicating the place more precisely for fear of subjecting the owner to undue requests for plants, but by his generosity I was supplied with a bountiful stock, which I tried in vain to make happy in my garden by planting in different situations and soils; at the end of two years none remained alive. As the note in THE GARDEN observes, at present it does not appear to be generally cultivated, but if it was more amenable to general cultivation it would not be offered in nurseries at the almost prohibitive price of 5s. or 7s. 6d. a root.

Edge Hall, Malpas. C. WOLLEY-DOD.

*Polygala paucifolia*.—I am extremely anxious to grow this. I asked Mr. Smith, of Newry, Mr. Thomson, of Ipswich, and Mr. Perry, of Winchmore Hill, to get it twelve months ago. They have all failed me. Mr. Smith sends me a dull-looking, soft, un-Polygala-like thing, which does not take me, or to me, at all and dies, the sender allowing that it is the plant that he has constantly failed with. Does any reader grow it—really grow it and flower it? Is it deciduous? I hope in time to have large masses of the three hardy *Polygalas*—*Chamaebuxus*, *Chamaebuxus purpurea*, and the three vars., red, white, and blue, of the native Milkwort; the last is a quite charming alpine when petted in a garden.—ROBERT BATEMAN, *Bentham Hall, Brosley*.

*Lobelia cardinalis*.—It is hardly fair for "S. W. F." to assume that, because roots of these assumed hardy plants winter safely outdoors in the locality of Torquay, therefore, they will do so anywhere. I never could safely winter them in Middlesex if the season was either very wet or very severe. It is so much better to be on the safe side, and either lift the plants in November and put them singly into sufficiently large pots, or plant them into boxes thickly, putting some fine soil about the roots and keeping them in a cool frame or greenhouse during the winter. Of course they should be near the light. If it be desired to propagate stock, that can be readily done by careful division in the spring before planting. Those who like these flowers should obtain stock of that lovely variety *Carmine Gem*.—A. D.

**Sweet Peas for cutting.**—The value of Sweet Peas for cutting cannot be over-rated, seeing the many good qualities they have. During the last nine or ten years I have been growing these in separate colours, as I need a continuous supply of flowers for table work, and have found Sweet Peas amongst the most useful, seeing the length of time they can be had in bloom, and they are always admired, let the season be what it may. For dinner-table work good self colours are far the best. Every effort should be used to arrange them as lightly as possible. Glasses with narrow necks should be avoided. Light foliage is the most effective to arrange with them, and as far as possible some sprays of their own foliage should



St. Margaret's, near Titchfield, Hants. From a photograph sent by Mrs. Deane, Fairfields, Farcham.

is the most prominent object, but Roses, Myrtle and Jasmine may all be found there. The house is surrounded by woods, and the lawn in front of the house is gay with many coloured flowers, bounded by a wall and herbaceous border separating it from the woods beyond. M. DEANE.

**Grass walks.**—Whenever I enter a garden the walks of which are of turf, I invariably feel as if there was added to even the loveliest surroundings a charm that similar gardens having gravel walks do not possess. If the soil be of the least retentive nature and becomes soft and wet in winter, a remedy can now be found in laying a pipe or rubble drain 2 feet beneath, and, at further, adding to the surface soil some ashes or grit, slightly rounding up the centre so that heavy rains either run off or quickly percolate away, and so that for walking on in winter they

gives the preference to the name *P. macrophyllum* for the same species. I first flowered this plant about fifteen years ago from seed collected in the Himalayas, and I agree with the remark that it will not yet be a common plant, even if it is destined ever to be so. Plants which have been growing in the same spot in my garden for at least ten years show no inclination to become divisible, continuing to be as one-rooted as a plant of *Fraxinella*. It is true that every one of the red flowers on a spike is a possible plant, and if collected when ready to fall nearly all of them develop growth, but for some unknown reason they are difficult to rear, and if I sow a thousand of them in a pan a foot square the produce at the end of three years is not more than a dozen flowering plants. In some seasons, as in the autumn of 1896, the spikes are as viviparous as those of *P. viviparum*, the seeds developing leaves whilst still on the stalk,

be mixed with them. During the summer I have used various kinds of greenery, but none produced so good an effect as *Gypsophila paniculata*. —DORSET.

### FLOWERS IN YORKS.

It is popularly thought that Yorkshire has an inclement climate. As a correction of this misconception I enclose you a list of the plants now (November 9) in flower in my garden here at an elevation of 400 feet above the sea.

<i>Anemone japonica</i>	<i>Hieracium aurantiacum</i>
<i>silvestris</i>	<i>Hypericum calycinum</i>
<i>Antirrhinum majus</i>	<i>Helianthus</i>
<i>Auriculas</i>	<i>Helenium grandicephalum</i>
<i>Aloysia citriodora</i>	<i>striatum</i>
<i>Aubrietia purpurea</i>	<i>Illecebrum bracteatum</i>
<i>Asters in variety</i>	<i>Jasminum nudiflorum</i>
<i>Achillea Ptarmica fl.-pl.</i>	<i>Lobelia cardinalis</i>
<i>Coreopsis</i>	<i>Milleri</i> and <i>syphilitica</i>
<i>Ceanothus azureus</i>	<i>Linaria Cymbalaria</i>
<i>Clematis</i>	<i>Menziesia polifolia</i>
<i>Crocus aurea imperialis</i>	<i>Mignonette</i>
<i>Calendula officinalis</i>	<i>Nigella damascena</i>
<i>Colchicum autumnale</i>	<i>Nicotiana affinis</i>
<i>Collinsia bicolor</i>	<i>Omphalodes verna</i>
<i>Chrysanthemum Burridge-</i>	<i>Primula denticulata</i>
<i>anum</i>	<i>Phlox (herbaceous)</i>
<i>maximum</i>	<i>amona</i>
<i>uliginosum</i>	<i>Pelargonium (bedding)</i>
<i>Campanula muralis</i>	<i>(scented-leaved)</i>
<i>hirsuta</i>	<i>Pentstemons</i>
<i>Crucianella stylosa</i>	<i>Physalis Franchetti</i>
<i>Coronilla glauca</i>	<i>Polygonum vacciniifolium</i>
<i>Choisya ternata</i>	<i>Physostegia speciosa</i>
<i>Dianthus</i>	<i>Roses in variety</i>
<i>Erodium Manescavi</i>	<i>Rudbeckia speciosa</i>
<i>Ecremocarpus scaber</i>	<i>Scabiosa atro-purpurea</i>
<i>Eucharidium grandiflorum</i>	<i>caucasica</i>
<i>Eschscholtzia californica</i>	<i>Salvia patens</i>
<i>Erica ciliaris</i>	<i>Spiraea Anthony Waterer</i>
<i>Erigeron mucronatus</i>	<i>Sedum stoloniferum</i>
<i>Escallonia Philippiana</i>	<i>Symphyantra Hofmanni</i>
<i>Fuchsia</i>	<i>Saxifraga Fortunei</i>
<i>Gentiana acaulis</i>	<i>Tritoma Uvaria</i>
<i>Geranium nodosum</i>	<i>corallina</i>
<i>pneum</i>	<i>Tropaeolum canariense</i>
<i>Hydrangea paniculata</i>	<i>majus</i>
<i>Hanamelis virginica</i>	<i>Vinca minor</i>
<i>Helleborus niger</i>	

R. MILNE-REDHEAD.

### BASAL ROT IN DAFFODILS.

THERE has more than once in THE GARDEN been a discussion respecting basal rot in Daffodil bulbs, without elucidating any knowledge as to the cause of the disease. Having bought a few dozen bulbs of Mary Anderson recently, and following the good custom of carefully examining the base of all bulbs before planting, I found an unusually hard, solid dead mass at the base of each bulb that would not separate. The healthy condition of any ripe bulb is that the dead base of previous year's growth should be able to come away freely and clear from the sound living bulb. Any attempt to remove the hard body in this case met with no success when dry. It was too hard to cut freely, and no separation could be effected otherwise. Moreover, the knife involved damaging living parts of the bulb, or, as there was no level line of cleavage, still leaving some of the hard dead substance bedded in the living portion. After soaking the bulbs in water for twenty-four hours or so, the dead matter could then only be separated by cutting and scraping, with very occasional stripping of small portions in a more natural manner. The condition of these bulbs conveyed clearly to my mind that fresh roots could not be produced except at the outer radius of the bulb, whereas in healthy Daffodil roots are produced in several rings within the outer one. A finer-grown sample of bulbs I never saw, but they satisfied me that planting with this hard dead mass attached is the secret and cause of basal rot. Basal rot had actually made progress in some half-dozen out of eight dozen bulbs; no doubt planted in this condition many more of the bulbs would have developed it next year.

Having, I believe, arrived at the cause of basal rot in the bulbs, the next thing was to seek the cause of the existence of this hard woody mass. It should evidently be cast by a natural process, and would in a state of nature be so cast and rapidly decomposed. These bulbs showed no natural line of cleavage from which the dead base could be cast. The bulbs had no doubt been taken up before natural cleavage was established, *i.e.*, while the base and roots were still alive. There was evidence of unripeness at top of the bulb to support this view. I think further investigation will prove that too early raising of bulbs is the cause of basal rot. If this is so, it can be dealt with by covering up in trenches for a short time any bulbs that prove to be taken up before the base is in a proper condition. We all know the mischief caused to Lilies by unseasonable lifting, but I think it has been overlooked in respect to Daffodils. DUDLEY DOCKER.

King's Norton, Worcestershire.

**Polygonum vacciniifolium.**—Mr. G. F. Wilson's note on this plant (p. 374) is a timely one. In mild seasons, such as the present, every additional flower helps to make the outdoor garden more attractive and lessens our dependence upon glass. A group such as that spoken of by Mr. Wilson is very bright, and its effect is greatly heightened by being associated with other plants, as he says. This rock Knotweed is at times difficult to establish in the garden, and a good many lose plants soon after planting, with the result that they come to the erroneous conclusion that it is not hardy. When once established it is hardy enough, and those who desire to make a trial of it would do well to procure young plants. *P. vacciniifolium* appears to prefer half shade, and although some say moisture is essential, I do not find this absolutely necessary if the roots are well under the stones of the rock garden.—S. ARNOTT, *Carsethorn, Dumfriesshire, N.B.*

**Pyrethrum uliginosum.**—I am surprised to see Mr. Wood class this among hardy flowers that are not thoroughly reliable. I have always considered it to be one of the coarsest habited things we have and hardly fit for association with the ordinary run of hardy perennials. With me it quickly takes up a lot of room, and I have frequently to prune with the spade and sometimes cast a barrowload on the rubbish heap. It is one of those things that, in spite of its undeniable value, there is but little demand for now. Those who once obtain it rarely have to do so again, and this kind of hardy flower is seldom asked for in the trade. I have a row of this *Pyrethrum* that was planted about five years ago, and without any care it every year produces thousands of blooms, which this season were as good as in the first year after planting. It was lately suggested in THE GARDEN that the plants should be cut down in June to make them dwarf, but I have but little sympathy with the efforts that are being constantly made to lower the stature of our taller growing hardy perennials. The height to which *Pyrethrum uliginosum* attains renders it useful for positions where things of quite moderate dimensions would be out of place. I lately saw it in large masses among neat bushes and low-growing shrubs apparently quite at home, and by reason of its height very effective. Anything less robust and of dwarfer growth would have been lost in such a position.—J. C. B.

**Tigridias.**—How very seldom one sees these beautiful and brilliant autumn-flowering bulbs in private gardens, and I have often asked myself why this is so. The experience of the last few years has rather solved the question for me, for I have been quite unable to harvest them properly. I have tried various plans; have lifted them at the same time that I have done my Gladioli, have placed them in dry sand out of the reach of frost, but they shrivelled up and have been of very little use at planting-time. Thinking, perhaps, that I might be wrong in this, I have lifted them with a considerable quantity of

earth, have left them in that, and allowed them dry off gradually, but here again the result has been the same. Some years ago, on visiting the garden of a lady friend, I saw a magnificent bed with hundreds of roots in it, with a multitude of blooms. I saw the owner of this garden the other day, and she told me she had lost every one of them, and in another garden where there was a goodly number the same doleful story had to be told. I have obtained imported bulbs which seemed to be plump and good, but by the time the planting season came round I found them very much diminished in size, which was, perhaps, natural, and when planted a number of them seemed to do no good. Have any of your readers had any experience with these remarkably striking flowers, and can they give any information as to the best way of wintering them? I see that the Dutch growers state that all these bulbs are easily grown, and recommend that they should be kept dry during the winter, a plan which, as I have said, has quite failed with me. If, then, a readers of THE GARDEN will give me any hint how I can better manage these delightful Mexican bulbs they will perhaps confer a favour on other beside myself.—D.

### FLOWER GARDEN NOTES.

A NEW departure that is very welcome has taken place within the last few years, both in public and private gardens, in the planting of beds of large size. I mean the selection of tall plants for filling the same and the gradual weeding out for the particular purpose of such things as Geraniums and others of similar height. This is all the more desirable when the surroundings are of a nature to suggest the use of tall plants, such, for example, as when the beds have a background of trees or when they are interspersed with other devoted to tall shrubs, both deciduous and evergreen. Under such circumstances the aim should be as far as possible to utilise the larger perennials, and if to many of them flowering rather than is objected to, a mixture could possibly be effected that would altogether give a long-sustained display. Planting should always depend on the surroundings. Where, for instance, foliage in great variety is naturally abundant, the employment of Palms and sub-tropical plants of all kinds or noticeable for their foliage is hardly to be recommended. This is simply adding to the mass of greenery, and somewhat on a par with the idea of pleasure-ground planting that formerly prevailed in covering every available space with common Rhododendron, Laurel, and things of similar character. Rather, if foliage is already abundant the aim in new planting should be the supply of colour that will best harmonise with existing beds, and where this has to be done, it is well this season of the year to go carefully through the well-prepared catalogue of herbaceous plants to ascertain the number of things that can be used with the view to present planting, or, failing this, to work up a stock for spring. In connection with several of the large families it should be remembered that many of the later introduction flower considerably earlier than the old type and are consequently contemporary with bedding plants; also that with a little attention in the way of the removal of dying flowers, nipping out first spikes, &c., in good time, to secure a more rapid development of the second show of flowers, and the complete furnishing of beds by the formation of bushy plants, nearly all of them can be depended on to furnish a long display. In all cases where a knowledge of the flowering season does not exist the plants should take care to acquire the same. A good system of planting can hardly be carried out without this. This applies to varieties as well as species, the variation in the case of the former being very considerable. Besides these large families, such, for instance, as Phloxes, Saxiflowers, Lilies, Starworts, &c., which may respectively be employed in variety in separate beds, there are other less known plants which will help to make very interesting mixtures, quite sufficient, I fancy, to plant the majority of garden

successfully with only a very little aid from other things. *Bocconia cordata* is an instance of a hardy plant splendidly adapted for bold dening. It is occasionally found in shrubberies, but I would also recommend it for bold beds in the open, where it should be planted fully, allowing plenty of room for development on all sides. The intervening spaces can be filled with *Aster Amellus grandiflorus*, *Chrysanthemum Anastasia* and *Little Bob*, dark-flowered *Antirrhinums* and *Antirrhinums*, or things of similar nature. Any of the above groundwork plants may act in a similar capacity to *Galtonia edicans*, which under favourable conditions will run up high enough to throw its graceful spikes well above them. I like to plant the bulbs in clumps of three or four, as a good mass of flower is hereby secured. The ground for their reception should be well broken up. Plant firmly at a depth of 6 inches, and give a winter mulching.

Returning to *Bocconias*, I have not seen the form *carnea*. If it bears out the description it should be a decided acquisition, and the deep-coloured spikes would afford an opportunity of contrasting lighter things beneath than those employed with the type. The tall *Sea Holly* (*Argemone superbum*) is another plant that may be used successfully in large beds only, as the foliage is somewhat peculiar. Anything on a smaller

should be well done, as both species will repay liberal treatment, the *Spiraea* especially, with its tendency to spread, being a decidedly hungry plant. *Hemerocallis* and *Funkia*—known respectively by the common names of Day and Plantain Lilies—may have one or more beds reserved for them, the former occupying the more central positions, although one of the family, *Sieboldii* or *Dumortieri*, as it is also called, is not taller than the *Funkias*.

Additional attraction will be given to beds so filled if a few of the variegated forms of each family are employed; indeed, some of the *Funkias* in this respect are on a par with the most pronounced variegation to be found among stove or greenhouse plants. The list of things available for large lawn beds might be considerably extended. I just offer the foregoing as instances of what can be effected in this direction, and if a start is once made the result will be satisfactory and lead to annual strengthening of the same. Naturally, the brilliant colouring of the best of the Dahlias, Sweet Peas, large-flowered Marigolds and the like is an inducement to include them if a preponderance of bright colour is desirable, and whether the mode of propagation is from seed or cuttings, the aim should be to secure healthy, sturdy plants in good time, so that, once planted, they go away quickly and come early into flower.



*Linum narbonnense* in Messrs. Veitch's nursery at Exeter. From a photograph sent by Mr. F. W. Meyer.

scale used in connection with it should be carefully selected. *Cimicifuga cordifolia* and *C. racemosa* are also worth a trial; the white feathery flowers show to great advantage against richly coloured, fine-foliaged shrubs, and should be equally effective in connection with other flowers. Beds that cannot fail to please are formed by an association of *Montbretia crocosmiæflora* and its varieties with *Gypsophila paniculata*. I hold because, given good cultivation, the tops of the spikes of the *Montbretias* will be quite 4 feet high. They start early into growth, and are consequently the better for early planting. Plant at a depth of 5 inches or 6 inches and mulch with short manure, not necessarily as a protection, but to prevent the soil drying out and to secure rust, sturdy growth. The number of corms in each clump will depend on the size of the bed, and they should be so arranged that some of the big-like foliage and flower-spikes will show up through the spreading panicles of the *Gypsophila*. To beds might be devoted to herbaceous *Lobelias* and *Spiraea filipendula* comparatively early in the season. When the *Spiraea* is in flower the foliage of the *Lobelia* will afford a pleasing contrast to the same, whilst later the relative positions would be completely changed. In all gardens where the *Lobelias* are found to be perfectly hardy such an arrangement might be planted at once. The beds

I never practise autumn-sowing of Sweet Peas, as birds are very troublesome, necessitating constant watching, even if the clumps are staked and otherwise protected by string, cotton or similar materials.

E. BURRELL.

Claremont.

**Cactus Dahlias.**—There is great confusion in this country as to what are really Cactus Dahlias and what are not, the tendency of exhibitors being to regard the decorative Dahlias as Cactus varieties. I and others are desirous of remedying this condition of things, and intend to have the names of the true Cactus varieties printed in the new schedules of the Massachusetts Horticultural Society, provided we can get the authentic list. Will any reader of THE GARDEN kindly give me the names of the true Cactus Dahlias.—W. E. ENDRICOTT, Canton, Mass., U.S.A.

**Kales and Beetroot in the flower garden.**

—We see, without much pleasure, a plate in the *Rural Horticult* of variegated Kales, which unhappily are used by some for the "decoration" of gardens. New, the form and colour may be as fine as in many other things, but for the decoration of our gardens such things are rubbish, if only from the fact of their evil odour after hard winters, and no waste of time could be worse than growing such things, which never can take a place

in any true flower garden. Of the same character are the purple Beets, used at Kew in the flower garden. Whatever we do in the flower garden, it is hardly necessary to use Kales and Beet in it when there are so many lovely things we neglect or forget, and things, too, like some of the wild species of Azalea and Lily, which may show their grateful faces to us for many years after planting them. If we wish to cool our eyes on esculents, the best way is to go to a good kitchen or market garden, either about London or Paris, where we willingly admit there are good forms of leaf and much better colour than in these variegated Kales and liver-coloured Beets.—Field.

#### LINUM NARBONNENSE.

The elegant plant here illustrated was photographed in the nurseries of Messrs. R. Veitch and Son, Exeter, where it is growing on the rockwork, and forms a spreading bush 2½ feet across and about 18 inches high. The flowers are arranged in a loose panicle with long pedicels. During dull or rainy weather the flowers are closed, but in bright weather they are expanded in their full glory, forming a most elegant object in rockwork or border. The individual flowers are fully 1½ inches across, bright azure blue, somewhat paler beneath, with white anthers and a white spot in the centre of each flower. *Linum narbonnense* flowers throughout the summer, and though we are now in November, quite twenty flowers are still open on the plant mentioned. The calyx is of a bright green colour; the leaves are linear, lanceolate, 1 inch to 2 inches in length and about an eighth of an inch broad. They are very pointed at the apex and are arranged alternately. The margins of the leaves are entire.

Altogether *Linum narbonnense* is a most desirable plant and of the easiest possible cultivation. When planting, a place at least slightly elevated should be given the preference in order to show the elegant drooping habit of the flowers to the best advantage.

Elmside, Exeter.

F. W. MEYER.

**Tufted Pansies.**—I saw in a garden in Midlothian during the past summer a simple, but very efficient arrangement with these Pansies. They were planted in a border running east and west, in the centre of which was a row of dwarf fruit trees and on the south side a row of Sweet Peas supported by galvanised wire Pea trainers. The Pansies were planted along the north side of the border in the form of squares, each square being 3 feet, with 15 inches of clear space between each square, in front of which was a grass edging. I here give the names of the Pansies. Lord Elcho formed its own square, as also did Archie Grant, Countess of Hopetoun, Blue Gown, J. B. Riding, Sylvia, William Niel, Ardwell Gem, Favourite and *Rosea pallida*. Each grew vigorously and bloomed profusely, aided by the kindly shade and the abundance of Moss litter at the roots.—W. L. M.

**Bulb planting.**—In October, 1896, I planted a large bed on the lawn with some 1200 poeticus *Narcissus*, and as the bed during the summer is filled with *Fuchsias*, I tried the following plan. The soil to a depth of 1 foot was taken out and the bulbs placed firmly in and re-covered with the 12 inches of soil. I was looked upon by gardeners in the neighbourhood as a lunatic, throwing away or rather burying money never to be seen again. In due course the leaves came up very strongly, and I began to fear that my experiment would fail, and I should have nothing but foliage and no bloom. However, I was delighted when the flowers began to show, and in the end I had a waving mass of bloom, much to my delight and somewhat to the disappointment of my neighbours. I see no reason why I should not have

this next year as fine a show as last. Out of curiosity, I dug down to see how the bulbs were looking. I found them in excellent condition. The advantage of this deep planting is that it does not interfere with the bedding-out in the summer. This last summer the bed referred to was filled with Fuchsias varying from 5 inches to 2 feet 6 inches high. The soil here is light, and all Daffodils, I find, increase rapidly. I am so satisfied with my last year's experiment, that I have tried it again in a basket, which is now filled with some 600 Daffodils of different sorts, but this time planted 8 inches deep, as the basket during the summer is filled with yellow Marguerites, and it was not necessary to plant 1 foot deep. Gradually, if the experiment continues to answer, I shall treat a large herbaceous border in the same way.—M.

### THE PEACH-LEAVED CAMPANULA.

UNNECESSARY as it may appear to some, it is yet needful at times to urge the claims of some of our older plants on the attention of growers of hardy flowers. These older plants were too long neglected, and even yet there is a danger that they may be put into the background by novelties possessing less beauty than these old-time favourites. Thus it is at times desirable to write about comparatively common flowers in order that their merits may not be overlooked. One of these old plants is the Peach-leaved Campanula, which, with its several forms, is an indispensable garden flower. It is a native plant which, though absolutely hardy, rewards by its increased beauty those who give it due attention and the rich soil it appreciates. *Campanula persicifolia* is varied in form, size and colouring, and the original or typical blue form has been surpassed by the varieties which have sprung from it. Of these, none are more admired than the white forms. These vary much in purity, some being of thick wax-like texture and with a glossy surface, which adds much to their beauty. Seen in the mid-day sun in the height of summer the white Peach-leaved Bellflowers are beautiful, but it is in the evening, perhaps, that one realises the beauty of these long wand-like spikes clothed with their pure flowers. When twilight is passing into darkness they are most effective, whether they raise themselves from among other flowers in the borders or mingle with others in the wild garden. In the moonlight tall spikes look almost ghost-like.

Among the white-flowered Peach-leaved Bellflowers the one known as *Campanula persicifolia* Backhousei or *C. p. alba grandiflora* is perhaps the most admired. One can see no difference between the plants sold under these two names, so that I have not hesitated to write of them as one and the same. It is a moot point if there is not some of the blood of *C. latifolia* in the fine plant first sent out under this name, but whether this is so or not, it can hardly be left out of the list of our best garden flowers. Fine as this is, it shows a flimsiness of petal absent in some of the best seedlings, and it is doubtful if it will ever be more admired than a good form of the variety known by the unwieldy name of *C. p. coronata alba*, which has its corolla so doubled as to form what is familiarly known as a "cup-and-saucer" flower. A good form of this in my garden has the stout wax-like blooms which give the flowers an added charm. The double white—an old and favourite flower—is of exceptional beauty, if a little stiff in its way. It is not so easy to retain long in the garden without the help of frequent division and the aid of fresh soil. There are also several semi-double white varieties of more or less value.

The Peach-leaved Bellflower gives us also several blue shades, a colour always acceptable in the garden. Some are exceedingly pale, and the range gives us pale and deep lilacs as well as rather deep blues. There are now some fine large-flowered blue varieties quite equal in size to any of the large whites. The double blue variety is not so plentiful as the double white, but is to be had by those who like such flowers. There are also blue "cup-and-saucer" varieties and semi-double pale blue, lilac, and deep blue forms.

Besides their uses in the garden these Bellflowers prove of great value for house decoration, especially in the form of long spikes for placing in large vases. The taller Campanulas are nearly all of value for this purpose, and should be more largely made use of than at present. As already indicated, a rich soil is, if not a *sine qua non*, at least needful if the best results are to be reaped. A good loam, well enriched with decayed manure, will give taller spikes and larger flowers than a poor, starved soil. This Campanula increases rapidly at the root, but the double forms are apt to dwindle away if left too long without division and transplanting. It may be observed that new flowers will push from the dormant buds at the base of the old flowers if the latter are taken carefully off. It is also, I think, advisable to grow *Campanula persicifolia* in a position where it is partially shaded from strong sun. Too wet a situation should, however, be avoided if healthy plants are desired. S. ARNOTT.

**Pæonies and rabbits.**—I think Mr. Burrell may safely plant Pæonies in positions where rabbits are plentiful, as I have given them a fair trial in some such spots and never found any traces of injury either from rabbits or any other vermin. I presume that Mr. Burrell's inquiry is intended to embrace only the herbaceous section, and I fear that the results with these in rough herbage will only be successful in the case of the strong growers, such as *P. officinalis*, double and single forms. This has been my experience, and I have tried many named varieties, most of which have failed to make crowns strong enough for flowering. In the first place they do not like the root-disturbance, and before they have time to re-establish themselves fairly, the herbage, and possibly tree roots, have robbed the soil of all nourishment, so that the Pæonies go on producing only small leaves and flowerless crowns year after year. With *P. officinalis* the case is different, and some fine clumps have rewarded the efforts made to secure them, as the plants seem quite able to hold their own after the first year. Probably the others might be induced to do likewise if the surface could be kept clear of weeds for two or three years, but it is only the very strongest growers that will really establish themselves. I quite agree with Mr. Burrell's remarks as to the results obtained by mixing Daffodils and Pæonies together in beds or groups in cultivated ground; the crimson hue assumed by the young leaves and stems of the Pæonies forms a perfect setting for the Daffodil flowers, and the leaves of the latter will be sufficiently ripened by the time the former cover the ground. To such a bed a further carpet and edging of *Scilla sibirica* will be found very attractive, but it is useless to plant it where pheasants are numerous.—J. C. TALLACK.

### SHORT NOTES.—FLOWER.

**Everlasting Peas for cutting.**—These are very useful for cutting, more especially the white form. Having a big demand for cut flowers, I find the white most valuable. Another recommendation of the white form is the length of time the flowers stand in water. I noticed some in a warm drawing-room here during the hot weather were fresh when Bougainvillea and things of this kind were quite faded.

Wheu at Rousden some years ago I noticed an enormous quantity was grown for cutting.—DORSET.

**Senecio pulcher.**—This is a very striking late flowering perennial, the colour a reddish purple, and the flowers very bold and massive. The colour is peculiar that it does not do to mix with other flowers and therefore when cut should be placed in a vase by itself. In this fine autumn it has been peculiar good, and there is now (November 8) a fine truss of flowers in full vigour, the plant being about 2 feet high.

**Mina lobata.**—To those who want a plant for climbing over a rough place or making a screen, this can be recommended. I have not grown it till this year, and I resolved to try it in several situations on soils. Where the soil is rich and damp it is very showy and blooming and is of little value. When planted in pots and in a sunny place it blooms well. I have plants of this against the foot of the abbey wall and full sun, and here it blooms freely. Some plants of this and Canary Creeper mixed and allowed to intermingle have a fine effect.—DORSET.

**Physalis Franchetti.**—A good deal has been written lately about this, and it appears as if some people had found a difficulty with it. I can quite believe that in some cold soils and situations the might be a difficulty about it, but in most places where the soil is light it is easily grown. I am not quite sure that it will be such a weed as the older for *Physalis Alkekengi*; this will be no disadvantage. The new *Physalis*, which is distinct in colour from the older species, will be found very useful for winter decoration, and in most parts of our islands it will be found a hardy and easily-grown perennial.

### NOTES ON STRAWBERRIES.

I FIND the undermentioned kinds of Strawberry answer very well in this neighbourhood, viz. Noble, Royal Sovereign, Gunton Park, Dr. Hogg, Vicomtesse, and Latest of All. I have this year discarded Elton Pine, Anguste Nicais and Waterloo, as I find I cannot depend on them for a crop after the first season. Noble, though somewhat lacking in flavour, can always be depended on for an early crop of large, handsome fruit, but I think eventually Royal Sovereign will displace it as the best early Strawberry in existence. The two best kinds to follow, I think, are Gunton Park and Dr. Hogg, both being of excellent flavour and good croppers. Then come Latest of All, also a good cropper, large handsome fruit, but somewhat deficient in flavour. I have resolved to plant a large bed every season of young plants layered into pots, and treat them as annuals. I planted a bed last year, the first was in August, of the following varieties:—Noble, Royal Sovereign, Vicomtesse, Gunton Park, Dr. Hogg, and Latest of All; and gathered Nob June 14; Royal Sovereign, June 17; Vicomtesse June 20; Dr. Hogg, July 1; Gunton Park, July 1; Latest of All, July 8. The best fruits of Royal Sovereign weighed 1½ ozs., and Gunton Park 1 lb. to the pound, without any disbudbing. By growing young plants like this one can plant close and so secure a good weight of fruit the first season, as well as keeping much freer of spider. Of course, it is always necessary to have a two-year-old bed to follow these young plants.—A. G. GATLAND, *Comington Castle, Peterborough*.

— Strawberry culture is carried on only for home consumption, not for market, and the varieties named below are those which I find succeed best for the purpose, and which have been noted in previous seasons. A few others are tried from time to time, but either they do not succeed so well, or are so deficient in quality that the culture is discontinued. Four varieties are grown—Keens' Seedling, Vicomtesse H. de Thury, St. Joseph Paxton and President, and they are generally forced and ripen outside in the order named, though, of course, the season outdoors sometimes makes a difference. Royal Sovereign has been planted, but so far only on a limited scale, and the following have been added for trial next year: Gunton Park, Lord Suffield, Leader and Monarch. Noble has been left out this season; it produced very large fruits and a good crop, but did not find favour. A system of culture has been practised several years, and

answers very well. A new plantation is made each year by inserting young plants, that are layered immediately after those required for forcing so soon as they are ready, which is from the middle to the end of August. The first season all flowers are removed from a sufficient number of plants to produce runners for all purposes, and they come early and are strong. These plants produce a heavy crop the second, and sometimes an equally good one the third year; after this they are dug up and the ground planted with Broccoli or something else. Thus a new plantation is made each year and an old one destroyed, leaving about an equal amount of space in the garden occupied with Strawberries. It always seems a great advantage to secure runners from young plants and from plants which are not allowed to fruit, as they come earlier and need not be trampled upon in netting or gathering fruit. It is even more advisable to adopt this plan when it comes a dry season. The soil is fairly heavy, and Strawberries usually succeed unless injured by frost at the flowering period. The ground intended for Strawberries is first cropped with early Potatoes, or something that comes off in July or early in August.—J. GARRETT, *Batsford Park, Moreton-in-Marsh.*

—The best flavoured Strawberries grown here are Vicomtesse H. de Thury and a seedling from it called Glangarry. British Queen I do not grow, the soil being rather light for it. The best early kinds in this district are Vicomtesse H. de Thury, Hungary, and Royal Sovereign; best late kind, Elton Pine. This soil being rather light, the newer kinds do not seem to stand well. I find no kind so reliable as the true old Elton Pine; it is in sheet-anchor, and I depend mostly upon it. Usually plant in spring—about April. I lift the runners from young plantations in autumn, and lift them thinly in nursery rows for the winter. During the winter the ground is thoroughly prepared. I prefer the rows to be 3 feet apart, 2 feet between the plants in the row, two plants going together, one on each side of the line. The clumps when bearing stand each separate, the sun and getting well at the fruit. Mice are not so troublesome as when the plants are closer. I usually put down a plantation of early and one of the kinds each season, destroying a like amount of exhausted plants. I take a crop of Onions, Lettuce, or such like crop from between the rows the first year to make the most of the ground.—MELVILLE, *Denrobin Castle, Sutherland.*

—Two varieties that succeed best and are most liked for flavour are Sir Joseph Paxton and President. The best early variety is Vicomtesse Héricart de Thury, and the one most liked for preserving. The best late variety to succeed well here is Mr. Radcliffe. Amongst the newer varieties, Royal Sovereign, Stevens' Wonder, and Gunton Park promise to succeed well and to be of good flavour. I find the best results are to be obtained from plants layered into small pots and potted out in well-trenched and manured ground early in August and September as possible. I never keep the beds more than two years.—G. HURTT, *Theylou Grove, Epping.*

—The best Strawberries here are President, Sir Joseph Paxton, Royal Sovereign, and Elton Pine. The above-named varieties I find to answer best here, both for forcing and outside cropping; they also bear carriage well. The best time for planting Strawberries I find is August and September. I always layer into small pots as early as possible, and plant out as soon as the runners are filled the pots with roots, mulching the ground immediately afterwards.—A. STATHAM, *Block Hall, Cheshire.*

—The best all-round Strawberry for crop, flavour, and general usefulness is Vicomtesse Héricart de Thury; for flavour, I consider Dr. Hogg and the old Filbert Pine best. The best early kinds are, I consider, Vicomtesse H. de Thury and Royal Sovereign; the best late kinds are Laxton's Latest of All, Aromatic, and Sir C. Nier. The best time to plant Strawberries is during August, especially if the ground has been some time previously prepared, using good strong

runners from fruitful plants.—R. MAHER, *Yattendon Court.*

—The varieties I find best for early use are John Ruskin and Royal Sovereign. Garibaldi I consider the most profitable for preserving, as it stands the bad weather better than Keens' Seedling, although the latter has a grand flavour. Noble I have discarded, it does not ripen at the point and is of poor flavour. I consider Elton Pine the best late variety for either garden or open field. I always plant Strawberries if possible in the early part of August and after Potatoes without any digging of the ground, 2½ feet between the rows giving plenty of room for light and air to ripen the crows.—EDWARD TATE, *Belcarries, Fife.*

—To keep up the longest succession of best kinds of Strawberries I rely upon four kinds, and always grow them in bulk, viz., Royal Sovereign, President, Dr. Hogg, and Oxonian. Each of these if well grown on young plants cannot be surpassed for general purposes, whether for home consumption or sending to the family when residing in town. These are my sheet anchors, and being given high cultivation never disappoint. I say this after having tried a great many of the highly lauded new kinds as they are offered. British Queen is erratic with me, evidently not quite at home on our stiff soil, but Dr. Hogg is nearly equal to it in flavour; hence my fondness for that kind. Auguste Nicaise, James Veitch, and others of the huge, flavourless kinds have no quarter here, as highest quality and appearance are the chief objects. Vicomtesse Héricart de Thury and Stirling Castle make excellent coloured preserve. Sir Jos. Paxton is rather inclined to mildew, and never equals President. I treat the earliest crops of Sovereign as biennials, only taking one crop, planting a bed annually from the earliest possible runners on well prepared sunny borders. These produce fruit from eight to ten days earlier than the same kinds in older plants.—WM. CRUMP, *Madresfield Court.*

—Strawberries were later this season than usual. John Ruskin is a favourite by reason of its earliness and free cropping; when fully ripe its quality is good. Royal Sovereign fruited well, and is esteemed for its earliness, size, and fine flavour. President is valued more than any other; it bears abundantly, fruit large, and flavour first-rate here. Duke of Edinburgh is a late Strawberry, and has done better here than any other late variety. There is no resident proprietor here at any time, so that all Strawberries (as well as everything else grown in the garden) have to be packed and sent. They are gathered in the afternoon, placed thinly on wide shelves in the fruit room with air passing over them all night from widely open windows; they are packed in the morning and sent off by train (small dishes of the earliest are sometimes sent by parcel post). I have found every Strawberry I have grown travel well under such conditions, and I think the airing process improves the flavour. I plant for main crops those which have been forced, and as soon as they are hardened after the fruit has been gathered.—M. TEMPLE, *Carron, Stirling-shire.*

—The best sort I have is Royal Sovereign, a first-class fruit in every way. Auguste Nicaise is also very good and a heavy cropper. Dr. Hogg, though of excellent quality, is not a heavy cropper. Eleanor, late, is a good cropper. John Ruskin is a heavy cropper and of good quality. Princess Alice is a fine handsome late fruit and of good quality. Scarlet Queen is a heavy cropper and good in flavour. Jubilee, the latest we have, is a heavy cropper and of good quality, but deficient in colour. Crescent Seedling is a heavy cropper, early, and good for preserving. All the foregoing travel well, except Scarlet Queen. I find the earlier the runners are planted the better for a full crop next season.—JOHN D. NAUSCAWEN, *Whiteby, Chadleigh, Devon.*

—Keens' Seedling is a fine old kind, but Noble I will discard; it is big enough, but not good enough. I also have President, Sir Joseph Paxton, Scarlet Queen, and Elton Pine. These I

find all good, reliable kinds. One very good productive kind I have under the name of Leon de Lamur, which I think must be a synonym of some other kind. I have had it for years under that name, but do not find it in any catalogue. It is a good kind for any purpose.—A. MATHISON, *Addington Manor, Wiltshire, Bucks.*

—The Strawberries that find most favour here for flavour are Garibaldi, British Queen, Duke of Edinburgh, Sir J. Paxton, and President, Grove End Scarlet being a special favourite for preserving. The best earlies are John Ruskin and Eclipse; best late, Elton and Waterloo. Frogmore Late Pine and Loxford Hall Seedling are a failure. Of the newer sorts, I have planted this year Royal Sovereign and Latest of All, which are both highly spoken of in this district. I find, if I can get the ground cleared to receive the plants, early in August is the best time to plant; by so doing I get a nice crop of fruit the first year.—P. WILSON, *Orchardtown, Castle Douglas, N.B.*

—The best early varieties for flavour here are Duke of Edinburgh and Garibaldi. Royal Sovereign promises well, but did not prove a heavy cropper here this season. Of late varieties the best here for flavour are Dumbarton Castle, Waterloo, and Wizard of the North. The last, although a very old variety, is still the best, and a very telling dish on the table.—DAVID MURRAY, *Calzean Castle, Maybole, N.B.*

—The best Strawberries I have grown here are Vicomtesse, Keens' Seedling, President, and Elton Pine. I am trying Royal Sovereign, and from the few fruit I had this season think it will be good. I like to plant as soon as I can get runners fit to do so.—E. TAPPING, *Castle Upton, Templepatrick.*

—The best flavoured Strawberries are the British Queen section, but they do not do well on our light soil. For flavour I find Keens' Seedling still hold its own with President, Hélène Gloede, Sir J. Paxton, and Sir Harry. The best early kinds are Royal Sovereign, La Grosse Suerce, Keens' Seedling, J. Veitch, and President; late kinds, Oxonian and Latest of All. Of the newer sorts, Royal Sovereign and Monarch are good on our light soil. I get the best and earliest return from well-rooted runners, planted as early as they can be had in autumn, on well-prepared ground.—A. HENDERSON, *Thoresby.*

—The best flavoured kinds are British Queen, President, and Empress of India. The best early varieties are Black Prince and Royal Sovereign, and the best late Latest of All and Elton Pine. Of the newer sorts, Royal Sovereign, Gunton Park, and Empress of India are the best. I plant as early as I can procure runners in well-cultivated ground made firm. No Strawberry I consider equals President. I gathered Strawberries on June 12 last year, and continued gathering up to August of this variety and British Queen, in the height of the season 50 to 100 lbs. in a day. This year it was July before I commenced with these two varieties.—G. BOLAS, *The Gardens, Hopton Hall, Wicksworth.*

—The varieties I consider best for flavour and quality are Royal Sovereign, President, Keens' Seedling, and Noble. They will all bear carriage. The best kinds in this district for flavour are Garibaldi, Royal Sovereign, President, and Keens' Seedling. The best early sorts are Royal Sovereign, President, Keens' Seedling, and Noble. The best late varieties here are Monarch, Waterloo, Countess, and Elton Pine. The new sorts most worthy of cultivation are Royal Sovereign for an early sort, and Countess for late use. The best time for making new plantations is early in September, as the plants then get established before severe weather sets in. Old beds should be done away with after they are four years old.—GEORGE MACKINLAY, *West Park, Ampthill.*

—The best flavoured here are President, Vicomtesse Héricart de Thury, Sir Joseph Paxton, Waterloo, Loxford Hall Seedling, and Latest of All. The best early and late kinds for the open air are—early, King of the Earlies, Vicom-

tesse H. de Thury, President, Sir Joseph Paxton; late, Oxonian, Waterloo, and Loxford Hall Seedling. Of the newer sorts worthy of cultivation Royal Sovereign is the best I have tried. The best time to plant Strawberries is early in August or as soon as you can get the runners. By following this method I can always get a pound of fruit off each plant the following year.—ALEX. CUNNINGHAM, *Kirkcubrighton Hall, Yarm, Yorks.*

— Of the varieties I grow, British Queen, Latest of All, Dr. Hogg, Gunton Park, Jubilee, Sir Joseph Paxton, Waterloo, Monarch and Royal Sovereign are the best flavoured. The soil here is of a sandy nature and sloping to the south. The best early kinds with me are Royal Sovereign and Monarch, and indoors the only variety grown is Royal Sovereign. The best new varieties are Royal Sovereign and Monarch. Leader seems a promising variety. The best late kinds are Waterloo and Latest of All. The best time to plant is the end of September. I have found the best results follow from potting the runners into 6-inch pots before planting them out.—C. J. SALTER, *Woodhatch Lodge, Reigate, Surrey.*

— The sorts I grow are Royal Sovereign, President and Sir J. Paxton. I find these three sorts do better than many others I have tried on our stiff soil. Stevens' Wonder I use for early forcing in the place of Vicomtesse H. de Thury, which has been discarded, Stevens' Wonder being much larger and the flavour almost equal. Royal Sovereign I consider one of the best Strawberries that has ever been sent out, as here we have both size and flavour.—J. BOWERMAN, *Hackwood Park, Basingstoke.*

— The kinds of Strawberries I find the best for private use are John Ruskin, Auguste Nicaise, Royal Sovereign, Garibaldi, Sir J. Paxton, President, McMahon and Waterloo. Royal Sovereign is first-class here for all purposes. I am also growing Carmichael's Prince and Princess of Wales varieties, and I think they will turn out good. The best early kinds here are John Ruskin, Garibaldi and Royal Sovereign; the best late kinds, McMahon and Waterloo. I take off the best runners early in autumn, lay them in a nursery bed, and plant them in well-prepared soil early in April with a trowel in rows 3 feet apart and 20 inches between the plants. I keep all runners cut off except where plants are wanted.—G. DINGWALL, *Belmont Castle, Meigle, N.B.*

— President is my best flavoured Strawberry. I also consider Keens' Seedling, although not fine, yet one of the best for flavour. The best early kind is undoubtedly Royal Sovereign; the best lates are Oxonian and Elton. I find the best time to plant is, given favourable weather, as soon as one can clear off a crop of early or second early Potatoes. By this plan I had a capital crop of fruit this year from runners planted last August, and I have not failed to secure a good crop during the last six years.—E. FOX, *Garners, Herford.*

— I find the best kinds for early work are John Ruskin, Royal Sovereign and Keens' Seedling. Mid-season, Sir J. Paxton, La Grosse Sucrée and President; late, Oxonian and Waterloo. Of the new sorts that I have tried I consider Royal Sovereign by far the best. The best time for planting in this neighbourhood is August. From plants put out the third week in that month last year I have had splendid crops and plenty of runners for early forcing without injury to the plantation.—JAS. DAWES, *Ledbury Park, Ledbury.*

— I find the following best for forcing, and they ripen in the order given: Vicomtesse Héricart de Thury, Royal Sovereign, La Grosse Sucrée, Auguste Nicaise, President, Sir Jos. Paxton, and British Queen. The following have done best outside: Noble, Royal Sovereign, President, Sir C. Napier, Scarlet Queen, Auguste Nicaise, Sir Jos. Paxton, John Ruskin, Competitor, Dr. Hogg, and Waterloo. I consider the best time to plant is about the end of August or early in September, plants having been layered in July into small pots. I have had good results by planting runners from the open ground, but much prefer the plants being layered into small pots.

I always get my stock, about 3000, for forcing from young plants put in the previous autumn, pinching out the flowers, so that I get strong runners in June and July. I have had a good crop of fruit from a plantation put out from small pots on September 9, 1896. The soil here is very light, and not naturally a good Strawberry soil, but by dressing heavily with marl or old Vine-border soil you can get good results.—G. H. GREEN, *Enville Hall, Staffs.*

— I think the following may be safely relied upon as the best flavoured varieties in this district: British Queen, La Grosse Sucrée, President, Enchantress and John Ruskin. King of the Earlies and Vicomtesse Héricart de Thury are the best earlies, with the Albert and Waterloo for late work. Royal Sovereign is, in my opinion, the best Strawberry of recent introduction. It is an excellent variety, of faultless flavour, a robust grower, and thrives well in almost any locality. Laxton's Leader I consider is the next worthy of merit. About the first week in August is the best time for planting Strawberries, the runners having previously been layered into small pots. With a little care and attention these plants are sure to thrive well and give satisfaction.—EDWARD GILMAN, *Alton Towers, Stafford.*

— The best-flavoured varieties I have grown are British Queen, Sir Joseph Paxton, Captain, President Improved, Dr. Hogg, Keens' Seedling, Black Prince and King of the Earlies. Although all the above are of good flavour, some are very shy croppers. The best early varieties for this locality are Black Prince, King of the Earlies, John Ruskin and Noble. Late varieties are Elton Pine, Frogmore Late Pine and Waterloo. I always plant my early Strawberries in August if possible, but the midseason and late varieties I plant in the spring; I find they do best here.—WALTER YOUNG, *Caprington Castle, Kilmarnock, N.B.*

— Noble is worthless both as a fruit for preserving or dessert; its colour is not good enough for the former, while for the latter it is too soft and void of flavour. The only good quality it possesses is that it is a fair cropper. The three sent out by Mr. Allan are all good, and as a late variety Gunton Park is very good. Royal Sovereign is good in every respect. It is a vigorous grower, hardy, and a most prolific bearer. The fruit is large and well flavoured. It is good alike for forcing and for open ground. The flesh is firm and travels well. I should say this will prove one of the best all-round Strawberries we have had for a number of years. Monarch and Leader are both too soft to be of value to private growers who have to pack their fruit and send a considerable distance. For all-round purposes President is good, as the flesh is firm and the fruit travels well. With good cultivation this may be grown to an enormous size. John Ruskin is an early variety, is good for home consumption, but the flesh is too soft to travel any considerable distance. Commander, Competitor, Sensation, and Hélène Gloede are all worthless here; the fruit is soft and void of flavour both when grown in pots and in the open ground. There is plenty of room yet for a good late Strawberry of the Loxford Hall Seedling type that will succeed on cold, heavy soil, such as the majority of it is in this neighbourhood. There are four things essential to a good Strawberry—quality, firmness of flesh, robustness of habit, and hardy constitution. Unless all these are combined in a variety it cannot be said to possess the necessary qualifications to recommend it to the public. Unfortunately, many spurious varieties with long-sounding names are palmed off on to the public; many of them soon go out of cultivation, but not till they have caused a great amount of trouble and annoyance to those who have grown them. It is essential to those who have to pack the greater part of their fruit to choose only those varieties with firm flesh, either for forcing or cultivation in the open ground. Some varieties, however, will not force early, but both Ruskin and La Grosse Sucrée will travel fairly well when carefully packed; to succeed

these, President and Royal Sovereign may be chosen, while for late use Auguste Nicaise. The last, however, is of no use for the open ground unless in favoured places. The plan adopted here to obtain early fruit is to layer runners into 4-inch pots. To have these as forward as possible a few plants are specially grown to supply them; by doing, if layered early, they will be ready for planting out by the latter part of July, and make strong crowns by autumn. If left to the ordinary course of treatment there is not time for sufficient growth to be made before frost sets in for them to develop strong flower-stalks, with which it is impossible to obtain fine fruit. Plan of this description, if planted a foot apart on sunny border where they can be protected by glass in the spring, will give a supply of fruit when it is most needed, that is, just before the plants from the open ground is ready for use. The plants should be mulched in spring to keep the roots moist, and so avoid too frequent watering.—H. C. PRINSEP, *Buxted Park.*

## GARDEN FLORA.

### PLATE 1145.

#### GARDEN CARNATIONS.

(WITH A COLOURED PLATE OF SELF CARNATION)

1, GEORGE MAQUAY; 2, ARIEL; 3, ROSMARON.

THERE is still room for good kinds of garden Carnations, varieties that will live and grow freely under the varying conditions of English climate, and that will give in the season an abundance of fine sweet flowers. Within the last decade the Carnation as a garden flower has received more attention than ever and in many gardens is now given all the attention it so richly deserves; yet there is still room for improvement and room for more kinds, because even out of the present number it is impossible to make a selection right for all gardens and all places; hence the fault of the popular system of selecting the best varieties. Individual tests and trials alone teach the grower what will grow best with him, and in these trials it is found that many new kinds fail to sustain their character or bear out what was said of them at their first appearance.

A few simple, but essential requisites to make up an all-round garden Carnation are very few. Many have been raised and are grown for the sake of their flowers alone but in other respects are useless as garden plants. The failure of some of these has led to questions on the possibility of deterioration under cultivation. If the weak side is constitution and growth, early disappointment is sure to ensue. The old pink Raby Carnation and the old Crimson Clove when crippled by fungoid disease are not so robust as they were twenty or thirty years ago. The best Roses in our gardens to-day are the oldest, and it is a very small percentage indeed of the many new ones raised within recent years that have taken a permanent place in our collections. The same is true of Carnations, and results even more meagre. Witness the many that have been sent

\* Drawn for THE GARDEN by H. G. Moon, Gravetye Manor. Lithographed and printed by J. Goffart.





(thin recent years certified with the approval societies and committees and the few that have any permanent standing. I am not going to belittle recent acquisitions, as they manifest great improvements along certain lines. New varieties have been prolific in recent years, but they are nearly all selected on the standpoint of their conformity with the florist's idea concerning perfection, and are wanting in those qualities that fit them for the open air.—H.

\* \* \* The Carnations here figured were raised by Gravetye by Mr. Herrington, and are not distributed. The white variety, G. Maquay, is found the finest white tried there.—Ed.

THE WEEK'S WORK.

KITCHEN GARDEN.

**CELERY.**—Many will have deferred moulding up the main crop on account of the dry state of the soil about the roots, but it would hardly be advisable to delay doing so longer, as the foliage being dry and so much of it exposed, there is danger of rain or snow bending it down and exposing the centre of the plants to frost. In some cases it may be necessary to add a good depth of soil to try the leaf-stalks sufficiently, and the work may be done more expeditiously if a couple of men can work together—one arranging and holding the tops in position while the soil is worked under each plant. This not only allows of the work being done more quickly, but it is almost impossible for any of the fine soil to enter into the centres of the plants, which so often results in stunted growth, and, perhaps, early decay. If the work has to be done single-handed it would be better to draw the foliage together evenly and secure it with strips of matting. The soil can be easily worked between the plants. In some gardens where a large quantity of Celery is grown the mode of culture is the same as that allowed in market gardens, namely, growing four or more rows in one trench. The plants are moulded up by means of a couple of light boards, which are stood on edge across the trench to divide the plants. The soil is placed between the boards to the desired depth, when they are drawn carefully up and the soil settles round the plants. The latest plants, which will not be used until next March and onwards, need not have much soil drawn round them at present; indeed, it would be much better if the plants are sufficiently compact not to require it, as the leaf-stalks when not blanched are naturally more sturdy and better able to withstand severe weather. Overgrown plants in the autumn seldom last long in good condition after the turn of the year, hence the gain in having late supplies so sturdy as possible at the present time. Some varieties are recommended for autumn and early winter use, as they are not sufficiently hardy to stand through a hard winter; therefore they should be used first, leaving such well-known varieties as Major Clarke's Red and Sandringham White for later supplies.

**CABBAGE.**—Plants of Ellam's Early put out in September have made rapid growth, and are sufficiently forward for immediate use where they are appreciated in a young state. Should the mild weather continue, most of these should be used up before Christmas, or they may be damaged by frost later on. As pointed out previously, it is always best to make three sowings during July and August. This affords plants in different stages, and if the early lot gets too far advanced during a mild autumn like the present, those from the last sowing make a valuable succession to turn in during March and April. If it is already done, draw some soil round those put out last to protect them from trying winds, as they suffer more from these than from frost.

Take care of any small plants which still remain in the seed-bed, as they will prove most valuable for putting out next spring.

**MUSHROOMS.**—Beds made up in the beginning of October will now be yielding their first supplies if the spawn used was fresh and the temperature of the beds has not fallen below 70°. In examining the beds recently it was noticed that the centres had sunk somewhat, causing the sides to leave the walls. It is very necessary when this happens that the cavity be filled up with fine soil, or both heat and moisture will escape, to the detriment of the produce. When it is found that the beds are backward in throwing up a crop, sprinkle the surface with warm water, to which add a little salt. If the temperature of the beds is likely to fall below 70°, cover them with double mats or a layer of clean dry hay. The moisture arising from the manure causes the hay to decay quickly, and if not watched closely may lead to the small "buttons" damping off as they push through. I prefer keeping the hay at least 1 inch from the surface to allow steam to pass off, which is done by placing sheep hurdles over the beds for the hay to be placed on, the hurdles being supported by cross pieces. Collect more material and keep it under cover in readiness for future beds.

**POTATOES.**—It appears that these are not keeping very well. It is usual to defer sorting the tubers over till wet weather sets in, which finds employment for outside hands, but my experience this season is that not a day should be lost in carefully turning them over and throwing out the bad ones. Several lots which had not been examined since they were put into the bins in September were found to have gone very bad, although they appeared quite sound when they were stored; hence my reason for suggesting immediate attention before the evil spreads. Seed Potatoes, too, will need looking to now, as it may be found that growth has already commenced, especially if they have been placed in a heap in a damp shed or cellar. The tubers if possible should be spread thinly on shelves where they can be kept quite cool. A great quantity of sets may be stored in a small shed by placing them on end in shallow trays, standing one above the other, leaving a space of a couple of inches between each for a free circulation of air. By selecting uniform tubers and carefully preserving them during the winter in the way described, the first step is taken towards securing perfect crops next season.

**JERUSALEM ARTICHOKE.**—The tops of these should now be cut down, and after they are removed it may be noticed that some of the tubers have pushed themselves through the surface. It would be advisable to draw more soil over the ridges, so as to bury them at least 4 inches. A further covering of leaves or litter would prove an advantage when the tubers have to be dug up during hard weather, as this would prevent frost penetrating to any depth and much labour would be saved. It is generally considered that the tubers are of better quality when used direct from the ground, but when they are not protected in the way described, a bushel or so may be dug up and buried in moist sand in the root shed. These can be used during a spell of hard weather.

RICHARD PARKER.

HARDY FRUIT GARDEN.

**MORELLO CHERRIES.**—As these are generally grown on north walls, advantage should be taken of the mild weather to push on with the pruning, training, nailing, or tying, as the case may be, endeavouring to complete it before a change occurs. The old and dead spurs and as much as possible of the old bearing wood should be cut away and enough young growths retained to fill all vacant places without undue crowding, as the principal part of the crop is borne on these. The surplus wood may either be spurred back to three buds or be cut clean out in the same manner as in pruning Peach trees. These spurs invariably carry fruits the following season, and they can be cut out afterwards at pruning time. Crowded

trees will be all the better for a branch-pruning, which will give more space for the laying in of young shoots. As a matter of course, the oldest of the branches or those which can best be spared should be cut out in this case to give the necessary space. This condition of things, however, never occurs when the trees are properly trained and well looked after, as the aim of the cultivator should always be to avoid overcrowding and to lay in no more wood than will eventually be required for furnishing the tree with main branches. One good thing, the Morello is not so susceptible to gumming as are the dessert kinds, and the knife can therefore be used with greater freedom on trees which have been neglected than if the reverse was the case. The pruning finished, attention must be directed to the cleansing of both trees and walls. If the latter are very old and the joints open and full of nail holes, they had best be pointed and stopped. In this case the trees, after being well washed with an insecticide, must be liberated, the branches tied into bundles, and secured here and there to the wall to enable the bricklayers to perform their work the more easily and expeditiously. Sometimes the Morello is trained against old stone walls, which, as a rule, are very cold-looking. This may be remedied and made to look warmer by washing the surface with limewash coloured with a sufficient quantity of Venetian red to make it a warm brick-red. A small quantity of linseed oil should be added while the lime is slaking, as this renders the wash more adhesive, and sufficient should be mixed at one time to do the whole wall to ensure its being of the same tint. This wash, if put on warm, will last from nine to ten years before it has to be repeated, and in addition to the improvement in the appearance of the walls it kills a host of insect enemies as well. If the walls are in a good state of repair, the fact of washing the trees will cleanse them also if the insecticide used for the purpose is forcibly driven against the surface by means of the garden engine. A useful and inexpensive wash for this purpose is soapsuds, and this can be syringed directly on to the trees and repeated again and again while the trees are dormant. The washing should be done early enough in the day to allow the trees to dry before nightfall. Use as few nails and shreds as possible in the training, and secure all the main branches to the wall with tarred twine. Where the walls are wired, pay particular attention to the tying and see that space is left for the wood to swell without the ties cutting the bark.

**PLUMS AND CHERRIES.**—In the absence of colder weather these may next receive attention. Established Plum trees should have all spur wood cut back to three and four buds, the non-observance of which rule results in course of time in the spurs becoming disproportionately long. Old trees are apt to get into this condition, the only remedy for which is spur-pruning. This consists in cutting away every other spur to within an inch of the main branch. The stumps so left will break the following spring and make fresh growth, which when stopped will in due course form new fruiting spurs. When these begin to bear, the remainder of the old spurs may be cut away. By this means old but healthy trees may in the course of a few seasons be entirely clothed afresh with new spurs. Another matter that should have attention is the training in of young growths to take the place of worn-out and decrepit branches in trees which are deemed worth keeping, or which cannot well be dispensed with. Although grubbing and replanting would be the best methods to pursue in this instance, such trees if treated as advised can be made to do duty for some years to come. With regard to young trees, thin out and regulate the wood if too many shoots have been laid in, and leave no more than are actually required for the formation of main branches in all cases. Cordon trees will merely require spur-pruning in, unless the spurs are projecting too far from the wall, when they should be treated as advised above. The leaders of young trees should be tipped if the wood is ripe; if not, cut them back to where it is firm. Dessert Cherries being so im-

patient of the knife should be pruned as far as possible with the finger and thumb during the growing season. If this has been done, nothing but a general trimming up, in the shape of cutting away dead spurs or other portions of wood, and a shortening back of the wood on any spur which may have been left too long, will be needed. This reduces winter pruning, as far as dessert Cherries are concerned, to a minimum, while it tends in a very great measure to prevent that too fatal disease, gumming, which generally follows a too free use of the knife, especially on heavy soils. Growers having soils of the latter description to deal with should use plenty of calcareous matter at planting-time. Another cause of gumming is carelessness in driving the nails into the wall too close up to the branches, and in such a manner that the latter rest on them or come into contact with them. This must, therefore, be avoided when training trees out afresh. These and Plum trees may be well washed with soap-suds if they have been infested with fly only during the summer, but if the Plums have brown and mussel scale on the wood and branches, something stronger is needed. A fluid ounce of petroleum should then be added to each gallon of suds, and apply it in a warm state. The most effective remedy for both these pests is a solution of caustic soda and crude potash, which cleanses the trees of all parasitic growths as well as insect foes. This should be used at the rate of 1 lb. of each to 10 gallons of water, be boiled to ensure its being thoroughly dissolved, and applied afterwards to the trees in a warm state by means of a sprayer. The person applying it should wear leather gloves.

**SUNDRIES.**—The present is an excellent opportunity for wiring walls, also for dealing with old and defective walls, facing them afresh either with new brickwork, cement, or cement concrete. Wall copings should also be examined and made good with cement, or white lead all loose joints. Trellises for training espaliers to, also for Gooseberries and Raspberries, should now be erected. Wire staples and raddisseurs are cheap enough, and if iron standards and the intermediate supports cannot be afforded, Oak and Larch posts will answer equally as well. If creosoted, these latter will last from twenty to twenty-five years. On wet days get a good supply of shreds cut and burn the old shreds and nails taken from the Morellos. Sort the nails over afterwards, when all that have their points intact can be used again. A. W.

## KITCHEN GARDEN.

### EARLY PEAS.

THE practice of sowing Peas in the autumn has almost gone out of date except in gardens where there is but little convenience for raising the plants under glass. It is, however, not so much the raising of the plants in some places as protecting them from frost in the early part of May when in bloom. Peas, as most gardeners know, are fairly hardy, and will with the slightest protection withstand our winters. It is, however, the late spring frosts after a mild and growing time that check them the worst. I have on several occasions had them cut down even when the pods have attained their full size. This garden lies low, and is, therefore, more subject to these late frosts than those situated on higher ground; for this reason it makes one careful. Marrow varieties usually suffer more than the round-seeded kinds, hence the reason these were formerly so much grown for early supplies. Since the introduction of cheap glass, none of these are grown by the market gardeners, for these know full well which find most favour in first-class shops. For those who have no such conveniences as cold frames the task is a difficult one, and puts the gardener to

his wits' ends to know how to overcome it, and often after much trouble he finds his early or first crops destroyed either by the late frosts, ravages of birds, snails, or mice. To guard against the former, sheltered places are selected where a little protection can be afforded, but even then there is no chance of getting crops like those who have properly constructed houses. When sown in the open at this time of the year mice are often very destructive, as the plants make but slow progress. The plan I have adopted with success is to procure some matchboards about the same length as the rows of Peas, which are sown on a south border. The boards are stood up on their edges alongside the rows, those on the west side being about 2 inches lower than the other. They must be at a sufficient distance apart to allow of squares of glass being put over. This will keep off the heavy rains and protect the plants from frost and other enemies. On mild days the glass should be removed to give the plants strength and keep them sturdy. If pieces of wood or glass are put at the ends of the boards, these will make the Peas secure against mice or birds, and if looked over early in the morning any snails found may be easily destroyed. The cost of such boards is trifling, as they may be procured for about six shillings the 100 feet, glass is also cheap, so that these temporary frames are not expensive. Next comes the question as to

### THE BEST VARIETIES

to sow. The tall ones grow too rapidly for the frames, and therefore are not suitable, so that for this kind of treatment the dwarfs, of which there are numerous varieties, are the best. Chelsea Gem is one of these; it is a sure cropper and early. Carter's Forcing is also a first-class dwarf, early kind and an enormous cropper. Carter's Early Morn grows rather taller; the pods are, however, much larger and the Peas of splendid flavour. Sutton's Forcing and Sutton's Seedling are two first-class varieties; the latter, though not quite so early, has splendid pods of a deep green colour. The above may be grown in temporary frames till all danger of frost is past, when they may be exposed to the outside temperature. When sown in the open ground without protection it will be necessary to put in the seed a little thicker, as some of the plants may get destroyed by slugs and mice, both of which are very troublesome at times. Sowing at the foot of a south wall is a good plan, particularly where there are no large trees to overshadow the young plants. When sown in such places as these it is necessary to keep a sharp look-out in frosty weather, for often the bright sunshine in the day-time has a serious effect on the plants, being thawed rapidly by its rays, while at night they are frozen through. In such weather it is a good plan to shade them from the sun by placing a board or something of that kind up against the wall in such a manner that the light will not be excluded, at the same time keeping off the sun. All these contrivances, however, take up time, and in most gardens labour is not sufficient to cope with the extra work entailed; for this reason the seed is often sown and the plants allowed to take their chance, being often killed or crippled to such an extent that they are of no use. The old adage of whatever is worth doing at all is worth doing well should be taken into consideration, and those who find they are unable to afford protection had better not attempt it. In many places in an ordinary winter the plants will stand without any protection, and where this is so, the seed should be got in during the next week or ten days, that it may have time to germinate before severe frost sets in. When the

ground becomes frozen just as the plants are coming through the soil they usually suffer seriously. When such happens, a dusting of dry ashes along the rows will help to protect them, as the frost has not such an effect on this as on the cold, wet soil. H. C. P.

**Tomato Eclipse.**—I note "G. W." (p. 371) has a good word to say for this Tomato, and I can quite agree with him as to its merits. I cut more fruit from it than from any other kind, and its earliness, combined with the fact that every fruit on well-grown plants comes of good shape, should make it a favourite wherever grown. The fruits are of medium size and excellent flavour. It seldom cracks unless very overripe, while the colour is all that can be desired. My plants were put out about 18 inches apart, and naturally at this distance both ways a good deal of the foliage had to be removed. I think it one of the most useful varieties in existence. Many growers of Tomatoes even at this time give far too much soil and make this too rich and full of humus. My plants for the last three years have had nothing but a rather poor loam and the residue from a garden smother to start with. A depth of about 3 inches of this is placed on a bench, and rammed as firmly as possible both before and after planting. The plants are turned out of small pots just as the first bunches of flower appear, and the roots kept well on the dry side until the fruit has set. When this bunch is set and swelling freely there is no fear of a crop, and feeding may commence almost at once.—R.

**White Jerusalem Artichoke.**—The white Jerusalem Artichoke is not quite so satisfactory with me as usual, for the stems of a portion of the plants, after making good growth and just as the tubers were nicely formed, were attacked by a fungus just above the ground-level and killed. Those not touched have done well, and average something like three-quarters of a peck of tubers to a root. About 20 per cent. of the crop was attacked, and there seemed to be no method in the attack, as individual plants through the whole plot suffered, and scarcely, in any case, were there two contiguous plants affected. Out of several rows of the old purple stock growing on the same plot side by side with the white ones not one was touched. The exact condition of the plant had no bearing on the disease, as those which succumbed earliest had not yet formed tubers, others had them half grown, and others again, did not become affected till they had produced full-sized tubers. The appearance of this disease will prevent, for the present, my discarding the old purple form entirely in favour of the white one, as I had intended doing next year. Perhaps others may have experienced the same thing; if so, it would be interesting to hear of it.—J. C. TALLACK.

**Onions.**—It seems rather surprising that vast quantities of French and Italian Onions should be brought over here and sold freely especially in the rural districts, by equally imported hawkers, who seem to map out the kingdom, and then canvass it in squads. Can there be in these continental red Onions any qualities diverse from our own, or is it but another evidence of that business enterprise which characterises the foreigner, and thus enables him even to beard the British lion in his own den? Surely we ought to be able to grow Onions enough for our own needs, for there can be no doubt that, where cultivation is good, such as may be seen in gardens, and often on allotments, the crops are very heavy and the sample fine and sound. Whilst these Italian Onions are probably mild in that respect resembling the Spanish bulbs so plentiful now in grocers' shops, they are not long keepers. Our best bulbs produced under what may be described as ordinary cultivation are firmer, larger, and far more enduring. No doubt we grow too many varieties for satisfying market or public demands, but such a richly coloured variety as Crimson Globe or Southport Globe should satisfy all requirements both of growers

and purchaser for colour as well as solidity. Lancrop is a first-rate flattish round, and Excel or a capital globe-shaped of the brown or yellow tinned varieties. These three, were culture embarked in largely on good deeply-worked soils and well manured, should produce not only heavy crops, but good paying ones. Onions will only thrive well where the soil is deep. We have for the past two years had very little trouble from the maggot or mildew, and where the cultivation is good, these things as a rule do not give much trouble. It is important that seed stocks should be good and always grown from choice selected bulbs obtained from the finest strains of the varieties.—A. D.

**Cabbage sprouts.**—The discussion that has taken place in THE GARDEN of late on this vegetable has been interesting. Were I dealing with my own gardens, then probably I should adopt both methods, namely, allow the plants to remain on the ground to give a second crop and *in versa*. Much would depend on whether I had a large or small kitchen garden, if Cabbages were much in demand, and whether I grew big or nick-heating, small kinds. If the largest amount of material was needed, then I should plant small, nick-heating kinds on Onion land at the end of September, and get them off in time to plant the ground with Ashleaf Potatoes early in May. These could come off in time to sow winter Spinach, Bleworts, Tom Thumb Savoy, Endive, Lettices, &c. Another method may be adopted. When the Cabbage comes off in May, the land may be worked over, a little artificial manure added, and Carrots sown. But were I growing large kinds I should allow them to stand for overwintering, as they would not be off in time to eat the land as above. It is a simple matter to have a good supply of nice young Cabbages in autumn by sowing seed at the end of June, planting out after second early Potatoes in August, four apart each way.—J. CROOK.

#### WINTERING CARROTS.

I am aware there are diverse opinions as to the best way of wintering Carrots, but a visit to the present Garden next spring will convince anyone that the best Carrots for colour and flavour are those left in the soil where grown and lifted as required. A few years ago I lifted most of my Carrots, Carrots amongst them, and stored them in the orthodox manner. At lifting, a goodly number of roots were split, many being coarse and unfit for the cattle. To leave roots of the size named in the soil through the winter would not do. They would soon decay, and for kitchen use such large roots are never used whole. I determined to adopt a different system, and instead of making a large sowing of Carrots at the end of March or early in April, I make four or more, and set roots that will keep as long as required. There is no trouble in housing or storing and much better quality. I am aware in wet, clayey soils this may not be applicable, but there is no need to sow as early as advised even in heavy soils, and certainly no need with medium-sized roots to be in a great hurry to store. The Carrot is much harder than many imagine, and to show its hardiness I had roots which stood the severe weather three years ago, the only protection being a little light litter. I always sow a good breadth for winter and early spring supplies in the middle of July, and if these tender roots winter, there need be no fear of larger ones doing so. For ordinary winter supplies to remain in the soil, treat them like Parsnips, lift them as required, and there are very few bad ones. On the other hand, the sowing of what may be termed the main crop cannot take place as early as often advised. The first week in May will be quite early enough. Carrots grown thus are not protected; they have a fair amount of top growth and there is no splitting, as with those grown a much longer time in the soil. Carrots buried in the ground do not winter nearly so well as those left in their growing quarters, and in the early spring when new growth commences it is an easy matter

to lift those left and place under a north wall. If well covered with soil they remain sound till May. For winter supplies I like the Intermediate type; the long rooted kinds are not suitable; and for later supplies I rely on the useful Early Gem or Model, and so far have never failed to winter these varieties in the open. I think many of our winter roots which grow coarse could with advantage be sown later and left in the soil longer if the latter is well drained and not too rich.

G. WYTHES.

**Carrot Red Elephant.**—I have grown this Carrot for the first time this year and have been very pleased with it. I did not expect to find anything very large, as the bed was never thinned. I find on measuring some of them to be 20 inches long and 10 inches round. Another year I hope to be able to give it a fair trial. It is of a splendid colour and very sweet when cooked.—T. COCKERILL, *Wirksworth, Derby.*

**Winter Kales at Chiswick.**—Some forty-six stocks of these Kales have just been examined by the fruit committee. Growth has been strong and the character of each variety fully displayed. Some exception, however, must be made in relation to all the varieties of the Buda type, as each of these, some ten stocks in all, and comprising the Buda, Asparagus, Delaware, Ragged Jack, and Lapland, became so infested with a wart-like fungus, that plants were almost decimated, and scarcely anything was left to represent them. Oddly enough, this disease did not extend to the curled forms nor to the broad-leaved Chou de Milan or Cottager's varieties. Of the tall Scotch section, three marks, representing high commendation, were given to Victoria Kale (Dobbie and Co.), a very massive, large-headed stock, one of the very best; Cuthbertson's Famous Strain, a very fine dark-hued variety; Selected Tall Curled (Kent and Brydon), also fine, but paler in colour, and Culzean Castle (Hurst and Son), a very strong, large-headed form. There was no good form of the Dwarf Green Curled sent. Chou de Milan (Watkins and Simpson) represented a capital stock of this late hardy Kale; Cottager's Kale (C. Turner) was much the best stock of this fine variety; Dwarf Hearting (Hurst and Son), a large, solid-headed form, something resembling the Savoy Cabbage, and variegated Kale (J. Veitch and Sons), this being the best stock of the ornamental section. Two marks of commendation were given to Dwarf Purple Curled (Dobbie and Co.), and Exquisite (Barr and Sons), both alike, of dwarf, spreading habit, and very close to ground, but also identical with the well-known Arctic Kale. The green form was not grown. Three stocks of Brussels Sprouts were sent, but all were coarse and devoid of quality.—A. D.

## ROSE GARDEN.

### THE ROSE SEASON OF 1897.

On October 30 I cut a far better lot of Roses than can be found during August in many seasons. From the middle of June I have been able to cut Roses in quantity: not a glut of a few weeks only, but a plentiful supply for fully four months. This is not often the case, and although we are favoured with such valuable additions to our perpetual-flowering Roses as Mrs. W. J. Grant, Marjorie, Mrs. W. C. Whitney and many others from the Hybrid Teas alone, much of the pleasure has been due to a more than usually uniform temperature and an exceptionally favourable autumn. Early in the season, while pruning, there was a bright prospect before us, but adverse weather entirely altered this. It was not until after the cold wave of mid-June that Roses again promised well. An undisputable sign of this was the poor attendance of exhibitors at the Portsmouth meeting of the National Rose Society.

By no means the least surprising feature of the past season was the remarkable rapidity with which Roses came on after mid-June. There has been less mildew than usual. True, we had what

threatened to be a bad attack late in July, but this disappeared in a surprising manner as soon as the weather changed, and from that date there has been very little mildew in this district. Nor has red rust been so bad as in many seasons, although some few varieties among the Hybrid Perpetuals were badly attacked for a short time. In this respect we see how valuable the many beautiful Teas and Noisettes are, also many of the Hybrid Teas, red rust never attacking the first, and seldom attaining to anything serious among the last-named.

Some years stand out as especially favourable to the more double Teas and Noisettes, which require a considerable period of fine weather to open well; others are noted for the depth and intensity of colouring found among Hybrid Perpetuals, which prefer a cool and fine season for their better development. This year seems to have suited all classes. There are also pleasing prospects for 1898. Brier stocks took well, while I do not remember a season when the Rose budding was more successful or the stocks lifted so easily for a long period. The wood of the Roses is ripening very steadily and in a much better manner than usual, especially among the Teas and Noisettes. Many thousands of plants will have been transplanted before this note can appear, and even if carrying some foliage I would prefer to plant early while the soil is still warm and in such a favourable condition. If dry, water when planting, giving the water after the first layer of soil is placed over the roots. RIDGEWOOD.

**Rosa rugosa.**—When the type and the white form are planted together and allowed to intermingle they produce a nice effect. It is a mistake to plant these in beds. They should be planted together in good soil, several plants to make a mass, allowing the turf to cover the soil. In the pleasure ground I have them growing in this way, and they make a brave show when in bloom, and now (October 19) they are very beautiful, being full of the bright glossy red haws. Squirrels are most destructive to the fruit, as they carry it away.—DORSET.

**Rose Narcisse.**—I often wonder why this charming little Tea Rose was not more grown. During the present autumn it has been very beautiful, the whitish buds and blossoms having been produced with great freedom. It does well on Brier standards, making a lot of growth, but is far prettier in a sheltered position on its own roots or budded low down. In the west of England in a light, hungry soil, or rather sand, it was one of the few Roses that really grew and flowered well, and a handful of the half-opened buds and blossoms is very beautiful.—R.

**Climbing Roses.**—The old-fashioned Monthly Rose is now (November 10) very beautiful on a sheltered verandah here. Buds in all stages of development are here, full-blown flowers, and many more to come. I could not help contrasting this with the famous Crimson Rambler, which during the summer months gave us a fine show of pretty semi-double flowers, but since then has been anything but beautiful. There is a peculiar dead colour in the foliage of this Rose that does not go well with either the summer blossoms or the autumn tints on surrounding vegetation. I can see but few good points in Crimson Rambler as an outdoor Rose.—H. R., *Bury St. Edmunds.*

**Rose Isabella Sprunt.**—A short time ago this Rose was spoken highly of as blooming freely at Kew. I am pleased to add a word in its favour. Some may say it is an old kind. This I admit, but it is none the worse for that, and according to my observations it is better than many of more recent origin. I grow several kinds of Teas, and this I consider amongst the very best. It is free blooming, and for button-holes, &c., it is grand. My plants are growing against a wall facing east, and they have stood without protection during the last twelve years. Although injured in the very severe winters it soon grew away vigorously. During the autumn

months it has been a mass of bloom. It also makes a good pot plant and forces well.—DORSET.

**Rose General Jacqueminot in November.**—The finest lot of this Rose I have ever seen so late in the season was placed on the table by the president of the Scottish Horticultural Association on November 1, Mr. Todd, who grew them in his garden at Stonybank, Musselburgh, near Edinburgh. They were brilliant in colour, fresh and fragrant as in June. The plants are still clothed with buds in plenty. It was stated at the meeting that during October over 300 blooms had been gathered, while all through the summer and early autumn flowers were abundant. Mr. Todd considers this by far and away the best red Rose for market. He grows most of the plants on their roots, and these are pictures of health and free of mildew; whereas General Jacqueminot received from Derbyshire and planted within sight of those on their own roots in the same soil and given the same treatment had shoots badly affected by mildew.—D. T. F.

## TREES AND SHRUBS.

### DOUBLE-FLOWERED CHERRIES FOR THE GARDEN.

Our gardens owe much of their beauty in the early spring to the Cherries, and the double white-flowered variety illustrated (*Cerasus serrulata*) is one of the most charming. This is a tree that should be in every garden worthy of the name. It is very strong in growth, and when in bloom looks as if covered with snow. A synonym of this species is *C. Sieboldi*. Then we have the beautiful *C. Watereri*, a lovely early-flowering tree, especially when in front of Scotch Fir, as I saw it once in a southern garden. The common Cherry has two very fine varieties, *C. caproniana* and *C. Avium*, which are also known as *multiplex*. Then one can also have the St. Julian's Cherry (*C. Juliana*), which has tender pink flowers, each like a rosette, and freely borne. There are a host of names given to the above, but the ones mentioned are adhered to in most nurseries.

C.

**Cratægus [*Pyracantha Lælandi*].**—This charming dwarf form of the old *Pyracantha* is excellent for growing in the foreground of shrubberies, or for transferring to beds which have been cleared of tender plants early in the autumn. It fruits with great freedom on the tiniest plants and can be trained into almost any form, the most effective shape being that of loose-growing pyramids; these, when covered with huge bunches of brilliant berries, are very fine, and much more effective than the formal-growing dwarf conifers so often used for clothing, during autumn and winter, spots that would otherwise remain bare.—J. C. TALLACK.

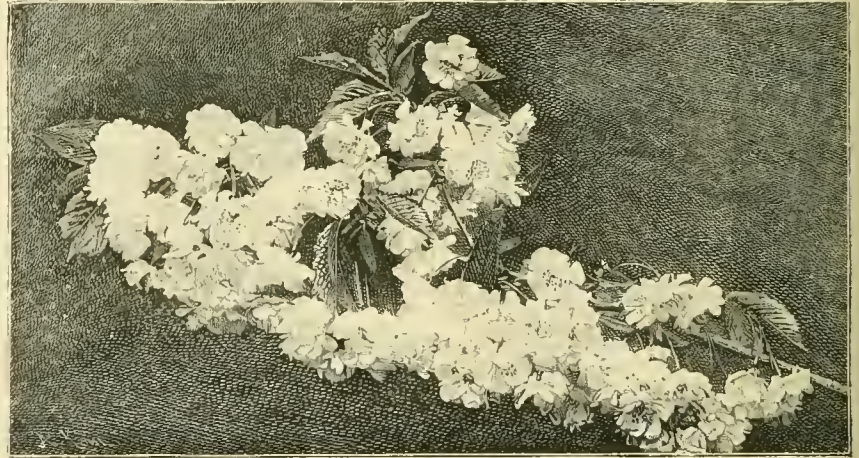
**Autumn tints.**—Had "K." been with me when last week riding by rail through the Oxshott, Cobham, and Horsley districts of Surrey he would have seen Oaks glowing in the sunlight literally like burnished gold. The spectacle the woods presented near and far was magnificent. No other tree would have given such glorious colour. A fortnight previous Chestnut, Beech, and Birch were alike gorgeous with colour; indeed, there was not a tree that did not then or later lend itself to the production of these beautiful tints. But there can be no doubt that gravel, chalk, and sand give the best effects in trees at all autumn seasons, whilst trees on stiff clays are much less beautiful. Near towns, trees too seldom show that rich coloration found in purer atmospheres. Then the autumn, too, has been dry and warm, ensuring wood and bud ripening in a remarkable degree, and with it this superb leaf coloration. If the autumn be wet or white

frosts prevail, the leaves die off quickly rather than ripen as they have done so finely this year. Even the most favoured of trees, Liquidambars, American Oaks, Maples, Sumachs, and others, give the best colour on light or warm soils. *Vitis inconstans* has, in spite of its usually warm positions, rarely given richer colour than has been the case this year, and the colour has also been unusually prolonged, doubtless because the heavy rains of early September promoted new late growth, which in turn ripened so thoroughly during the warm, dry October.—A. D.

**The common Barberry.**—A great many of our hardy shrubs are remarkable for the beauty of their fruits at this season of the year, but among them all the common Barberry is the best. As a single specimen, and where allowed to develop into a large bush, this Barberry is seen at its best, for it will be now completely veiled with long sprays of berries of a brilliant red colour, which remain fresh and bright for some time. In the spring, too, the yellow flowers are very attractive and agreeably scented. A desirable feature in the case of the Barberry is that it will hold its own in dry, stony soils better than many other shrubs, and without any attention it forms quite a symmetrical bush. The berried sprays remain fresh for a long time when cut. Among the several varieties of this Barberry are two with white and blackish fruits respectively,

may be rooted in this manner, but it is scarcely ever employed for their increase, as seeds are readily obtained and germinate freely. At the same time the better varieties are usually grafted or budded on to seedling stocks, a union being quickly effected.—ED.

**Celastrus scandens.**—This is the Bitter Sweet or Climbing Waxwork of the United States, of which district it is a native, as it occurs more or less from Canada to Virginia. This *Celastrus* is just the thing for covering rough mound tree stumps, or for furnishing some parts of the bolder arrangements of rockwork, as it is of rapid growth and soon forms a dense mass of wiry shoots twisting here and there. The oval-shaped leaves are of a distinct glossy green, while the flowers play no part in the embellishment of the plant. They are small and of a greenish yellow colour, and being borne in short-stalked clusters are scarcely noticeable. The fruit, however, much like that of our Spindle Tree (*Euonymus europæus*); indeed, they are both nearly related to each other. In the *Celastrus* the exterior of the capsule changes to yellow, and soon afterwards the segments open and the bright red seeds are then visible, in which state they remain some time. It is an old plant in gardens, having been introduced in 1736. This *Celastrus* must not on account be associated with delicate subjects, as from its aggressive character the weak



A spray of the double-flowered Cherry.

but though distinct and curious, they are both much less attractive than the normal form.—T.

**Layering Laburnums.**—I have several fully-grown Laburnum trees on the edges of shrubberies and coverts which I should be sorry to cut down, but they are now beginning to damage the young trees, which have spread out towards them. Would it be possible to layer them as one does Laurels? If so, at what height should one cut them? and at what time of year is it best done?—ALICE WILSON.

\*.\* If the Laburnums in question are, as stated, fully-grown trees, it would be useless to think of layering, as, in the first place, they could not be brought down low enough for that purpose without a good deal of mutilation, and, secondly, much of the beauty of the Laburnum consists in the long drooping racemes of blossoms having ample space for their development, which would not be the case if the branches were brought down into contact with the earth. We should suggest cutting the plants back to a reasonable size, and what that is depends upon the surroundings and the position they occupy. The Laburnum will stand pruning fairly well, but, of course, if the trees are headed back the following season's display of bloom will be sacrificed. The winter months are the best for carrying out this operation. Though layering is not recommended in the case of these trees, Laburnums

neighbours will quickly suffer. As the seed-pods are for the greater part hidden by the foliage this *Celastrus* is more conspicuous after the leaves drop than it is before. A nearly allied species *C. articulatus*—has been introduced from Japan and the leafless branches covered with fruit are sold during the autumn in all Japanese towns where they are employed for indoor decoration for which purpose they are well suited.—T.

**Berberis Thunbergi.**—Very few of our deciduous shrubs can compare with this Chinese Barberry in the rich tints assumed by the leaves before they drop, as they are just now of a bright glowing scarlet-crimson hue, and seen in a mass this species forms a brilliant object in woodland scenery. It is in all respects a very distinct kind, being much less robust than the different forms of the common Barberry or the Asiatic *B. aristata*. Thunberg's Barberry, which, by the way, is also known as *Berberis sinensis*, is a somewhat spreading bush with arching branches, which give it a very pleasing outline. In the spring the leaves are when first expanded of a very delicate green and just as they are partially developed the flowers make their appearance. They are as a rule freely borne, but are not particularly conspicuous. The small, oblong sealing-wax-like berries are very bright, but they are often sparingly borne. When, however, they are pretty numerous, these berries form a valuable

ditional feature, for they remain fresh and bright a long time. It is quite hardy and will hold its own in poor soils where the leaf colour in autumn is of the brightest.—F. C. P.

—Just now this is one of the most brilliant deciduous shrubs. It is a splendid subject for massing, and one would not soon forget the fine colour-effect produced by a large quantity of it at this season of the year. The low-growing, spreading character of the shrub tends to bring it directly under the eye, and the numerous tiny leaves, so closely arranged, give the brilliant colour-effect so much admired.

FERNS.

DORYOPTERIS.

All the species belonging to this sub-genus of Pteris are of dwarf habit, and form a very distinct and interesting group. Though some are classed with the greenhouse Ferns, I find they succeed best under stove treatment and like more shade than many of the Pterises. They may be raised from spores, but it requires great care to succeed with some, especially *D. nobilis*, which is one of the finest of the group. I have only known of one or two instances of this being raised from spores, and then the greatest care is required to establish good plants.

*D. PALMATA* is the best known and most useful, being grown largely for market. If care is taken to select good spores they germinate freely and soon grow on into useful-sized plants. It is one of the best to use in a small state, and when about three plants are grown together they are very effective in a 4½-inch pot. Under good treatment they will grow about 8 inches high; the rich deep green fronds form a nice contrast to those of a lighter hue.

*D. LUDENS* is a distinct species, and the fronds vary much in shape. The barren ones are unspined, some being nearly triangular, others broader and lobed; the fertile fronds are palmate, and have long stipites growing much above the barren ones. I find after the second year it is difficult to keep plants in good character; therefore seedlings should be raised periodically, with care they come fairly well.

*D. SAGITTIFOLIA* is very pretty, but rather difficult to manage. Being of small growth, overpotting must be avoided and plenty of drainage should be provided.

*D. PEDATA* is a dwarf, free-growing species, which I have found come freely from spores and make useful little plants in small pots. It somewhat resembles *Pteris geraniifolia*, but has broader fronds, with short stiff stipites.

*D. HASTATA*, I find, varies very much when raised from spores. In its best form it is a useful fern, but often the fronds are irregular and imperfect.

*D. DUVALI* is a distinct species lately introduced from the Continent. It is somewhat after *nobilis*, but the fronds are more regularly lobed and of a rich deep green. I have not yet seen seedlings, but find it may be increased by division and is of free growth. If we can get seedlings it will undoubtedly become one of our most popular ferns. A. H.

*Blechnum occidentale*.—This is a useful Fern for decoration. Now that the Pterises have become so common it is necessary to look for something fresh, and in the above we have a most welcome change. It may be raised in any quantity from spores, and is a quick and free grower. It should be grown on in a stove temperature and well exposed to the light. Potted in a good loamy compost, it grows freely and makes fronds of good substance. The young fronds have a bronzy-brown tint. When thick bushy plants are required two or three may be grown together, but grown singly most symmetrical specimens may be had. It is hardly suitable for anything larger than a 4½-inch pot, but under good treatment it

makes a fine plant in this, and may also be recommended for small pots. Two other varieties which closely resemble the above are *B. polypodioides* and *B. glandulosum*. These are equally useful, the latter especially, as it grows taller, and when well exposed the bronzy-red tint in the young fronds is very bright. It is only when grown on freely from the time the seedlings are raised that these *Blechnums* make useful plants. Once let them get stunted or pot-bound they rarely make satisfactory growth afterwards.—A. H.

ORCHIDS.

PLEIONES.

VERY bright and effective during the dull days of winter are these charming little Orchids, and I have noticed that amateur cultivators are becoming much more familiar with their culture than formerly. They are by no means difficult to grow, and present a much better flowering return for the trouble bestowed upon them than many larger growing kinds. *P. lugenaria* is one of, if not the best known of all, and also one of the most useful. This, if brought along in successional batches, will keep the cool house bright for many weeks with its rose and white blossoms. *P. humilis*, again, is a very beautiful plant, and perhaps unequalled in the genus for the bright tints displayed on the lip. Pleiones, unlike most epiphytal Orchids, are not at all incommoded by being disturbed at the roots; in fact, an annual repotting is one of the usual cultural details. But it must be carried out at the right time, for to interfere with the roots just as they are in the middle of the season's growth would prove decidedly harmful. Most of the species throw up their flower-spikes from the base of the old pseudo-bulb just before commencing to grow, and the best time to repot is just after the flowers are past, but before any young roots are forming. The old pseudo-bulb—that is, the one preceeding the flowering one—will usually be found so far decayed as to be of no further use to the plant, and this may therefore be cut away. The roots from the flowering bulbs, too, will usually have performed their functions and might also be taken off, except a little tuft just to help to hold the pseudo-bulbs in position. The compost must be a substantial one, nice fibrous loam, peat fibre, and chopped Sphagnum Moss being mixed with plenty of finely broken charcoal and crocks. Let the drainage for pots and pans be ample, and protect it by laying a little rough Moss upon the crocks. It is usual to mass the bulbs in pans a foot or so across, and, culturally, no fault can be found with this way of growing them. But when they are required for grouping, these large pans are not nearly so useful as a larger number grown in small pots, because the absence of foliage on the plants at the time of flowering gives them rather a flat, not to say a garish, appearance. The smaller pots may be introduced among small *Adiantums* or *Pterises*, the soft tints of the blossoms showing very prettily among these. A very pretty mode of culture, too, was illustrated in THE GARDEN during the early part of the present year. This was to grow them on wood blocks, these being lightly dressed with compost and a few small Ferns planted with them. I cannot say I am partial to planting Ferns on Orchid blocks or in their pots, as is sometimes done, but, judging by the pretty photograph, the end in this case justified the means.

After the plants are potted, great care is necessary with watering, for if the compost gets moist and close, the little roots will have a difficulty in entering it. But this is not for long, and when once they have a good hold on the compost a very liberal supply is necessary. This must be continued right up to the time the pseudo-bulbs are finished, when they may again be kept drier. The foliage soon turns colour and falls off, and then for a short season they may be absolutely dry. Temperature is not, perhaps, a very important

point with these Orchids, and although they do not require more heat than *Sophranitis*, *Odontoglossum grande* and others that do not like the very coolest quarters, yet they do well with a nice shady, well-ventilated position in the Cattleya house. Insects are not particularly troublesome, the worst being red spider and brown scale, but these are easily kept under by ordinary vigilance. Pleiones are by some authorities merged into *Celogyne*, but though their botanical characteristics may be similar, they are quite distinct as garden plants. R.

*Trichopilia (Pilumna) laxa*.—In habit and shape of the blossoms this pretty species is not unlike *T. fragrans*, but the spikes are usually more pendent. I have seen it in several collections during the week, and in each case the fragrance was very noticeable. It may be best described as an intermediate house Orchid, as though it may be grown with the *Odontoglossums*, the bulbs are large and the flowers more freely produced when given a little more heat. It is best grown in medium-sized pots or baskets in a compost consisting of peat fibre and Sphagnum.—H.

*Cymbidium eyperifolium*.—There is a fine plant of this now in flower at Cambridge Lodge, the flowers being not unlike those of a small form of *C. Traceyanum*. The plant is healthy and strong, has fine large pseudo-bulbs with the characteristic narrow foliage, and the spike is carrying seven flowers. The sepals and petals are pale green, with lines of brownish crimson over their entire length. The lip has a white margin and many bright crimson dots. It is grown in a small annex at Camberwell in company with the hybrid *eburneo-Lowianum* and the reverse cross.

*Goodyera Rollissoni*.—Although this Orchid boasts nothing much in the way of flowers, the foliage is strikingly handsome, far superior, in fact, to many of the more expensive and rare *Anacochilus*. Not that this is very plentiful, and it is seldom that one comes across such a fine lot as that at Mr. Bull's nursery, where they are in fine foliage just now. It is a vigorous growing plant, with broad leaves of a rich dark green on the upper side. This is overlaid with stripes and blotches of a golden bronze, while underneath they are uniformly of a rich velvety purple. It should be grown in plenty of heat, a moist atmosphere, and given a shady position.

*Odontoglossum tripudians*.—This *Odontoglossum* I have noted in flower in several collections within the week. It is a bright and effective species, and I wonder it is not more grown. It may not be exactly in the front rank of the genus for size, but the bright yellow blossoms are very useful just now when the triumphans, luteo-purpureum, and other more popular kinds are conspicuous by their absence. It is imported occasionally with *O. Pescatorei*, and, like this well-known kind, thrives well in fairly small pots of peat fibre and Moss, with the usual treatment as recommended for cool *Odontoglossums*.

*Phalænopsis Regnieri*.—Flowers of this finely-coloured Moth Orchid—which does not really differ much from *P. Esmeralda*—come for an opinion from a Somerset correspondent. They are of average merit, though their freshness and bright colour show that they have been grown well out of the fog area. When produced at this late season they make a pretty show, though personally I would prefer more seasonable blooms. *P. Regnieri* thrives well in a warm, moist house and is not difficult to grow. It is a native of Cochin China, and was introduced in 1874, being distinct from most *Phalænopsids* in the erect flower-spikes.

*Oncidium Marshallianum*.—Though rather out of season, the beautiful golden yellow blossoms of this fine species are very pleasing and welcome. The tall branching spikes are very elegant, and they last a long time in good condition—too long in many cases for the health of the plant. It is a cool house Orchid, thriving in

company with *Odontoglossum* of the grande and similar types. Like the nearly-related *O. crispum*, it dislikes a large body of material about it, and about an inch for medium-sized plants is ample. The compost must be of good quality, and the drainage requires special attention, as the rather large fleshy roots require plenty of moisture all the year round.

**Angraecum citratum.**—I noticed this in flower recently with Mr. Bull, the pretty white blossoms with a pale creamy tint having a pretty effect. It is one of the dwarfest in the genus, rarely growing more than 6 inches high, but producing fine racemes of bloom from the leaf axils. It dislikes much material about the roots, and is safest in small wood baskets well drained, with a little clean Sphagnum Moss about the roots and base of the plant. Plenty of heat and a moist atmosphere are required, and it must never be dried at the roots.—R.

**Scaphosepalum gibberosum.**—This species and one or two others such as *S. oethodes* form a set of Orchids not much in favour with present-day growers. Yet where quaint and singular forms are appreciated they are worth a place, and one looks upon their going out of cultivation as rather a slur upon the collectors who sent them home. The other day at Cambridge Lodge I noted fine plants of several in this section, and when well flowered they have a pretty and graceful effect among the richly coloured and more popular *Masdevallias*.

**Dendrochilum Cobbianum.**—This pretty plant I noted recently in bloom at Mr. Bull's. It is a small-growing species, not above 8 inches in height, the pretty pale yellow blossoms having a light and pretty effect on the dark green foliage. It may be easily grown in a warm, moist house, delighting in a shady position while the growth is forming. Very little compost is needed, but this should be of good quality, the roots not taking kindly to frequent disturbance. It is a native of the Philippine Islands, whence it was introduced by Messrs. Hugh Low and Co. in 1879, and was dedicated by Reichenbach to Mr. Cobb, of Sydenham, with whom it first flowered.—H.

**Stanhopea eburnea.**—Almost every week I meet with this species, and although the flowers last but a few days in good condition, this is amply made up for by the number of them produced. Spike after spike is produced for months on end, and no appreciable harm is done to the plant by this freedom of flowering. It is a noteworthy fact, too, that although many *Stanhopeas* will not flower if pulled about at the roots, it makes not the least difference to *S. eburnea*. Give this species plenty of moisture at the root and a fairly good compost, keep it free of insects, and in a comfortable temperature, then flowers in plenty will be produced.—R.

**Habenaria carnea.**—This pretty plant I have noted in flower during the week, the delicate flesh-tinted blossoms having a nice effect upon the prettily marked foliage. The spikes rise about a foot high, the upper portion closely covered with flowers, each being furnished with a long pale-coloured spear. *H. carnea* is not a difficult plant to grow in a moist tropical house. It is strictly herbaceous, dying down annually in autumn, throwing up its growth and leafy flower-spikes in spring. The roots may be potted in a compost consisting of sound mellow loam, leaf-mould, and chopped Sphagnum Moss, plenty of crushed charcoal and finely-broken crocks being mixed with this. The bulb may go down fairly deep, so that the roots run freely among the drainage, and I noted during the summer that a batch of this Orchid was doing remarkably well in a bed of cocoanut fibre, this doubtless helping to keep the roots moist. Plenty of water is necessary as long as growth is active, and one of the most frequent mistakes in its culture is drying it severely in winter. There is a fine white variety of this pretty plant which has recently been introduced from Singapore. The type and variety formed the subject of one of THE GARDEN

plates in the issue for March 16, 1895, and the habit and general character of the plant are there well shown.—H.

### THE BLUE VANDA.

(*V. CÆRULEA*.)

THIS is one of the best of the *Vanda* tribe. It was discovered as far back as 1837, growing on large trees on the Khasia Hills, and fully exposed to sun, wind, and rain. In its native habitat it is found at an elevation of from 3000 feet to 4000 feet, being a little lower down than *Cypripedium insigne*. It is comparatively a cool-growing Orchid. The usual practice with this lovely *Vanda* is to grow it in teak-wood baskets, so that it may be suspended close to the roof-glass of the house, where it will be greatly benefited by plenty of sunlight and the best air currents at command. During active growth the plant should be supplied with

plenty of water at the root, and the atmosphere surrounding it should be kept moist. As soon as the flowers are ready to expand the plant may be removed to the coolest part of the house, and where the atmosphere is drier. During the winter months great care must be taken not to overwater the plants, or probably the foliage will become spotted and unsightly. The *Cattleya* or intermediate house will suit this *Vanda* during summer, but when at rest the cooler and drier atmosphere of the Mexican house will answer better. The baskets in which the plants are grown should be three parts filled with crocks or charcoal for drainage, surfacing up as near to the bottom leaves as possible with clean, fresh-gathered Sphagnum Moss.

At Cambridge Lodge there are many fine things to be seen, the very distinct Cambridge Lodge variety among the number. It has very large spots of purple on the dorsal sepal and is a grandly formed flower, quite distinct from the Chantini section. Several of the yellow forms were also noted, and these are among the most beautiful of all *Cypripediums*. Ernesti and many others, as well as a very fine batch of the typical form, will soon be a splendid sight.

**Trichosma suavis.**—A very fine plant of this species now in bloom at Cambridge Lodge, carrying twenty-two spikes of the characteristic little flowers, these, as the plant is strong and well established, being thrown well above the foliage. It is a pretty and useful plant when well cultivated, but being found growing naturally at considerable elevation on the Khasia Hills, cannot do with close, warm treatment. It likes a shady, moist house during the summer months and plenty of water at the roots, while during t



*Vanda carulea.*

abundance of water at the root, and the atmosphere surrounding it should be kept moist. As soon as the flowers are ready to expand the plant may be removed to the coolest part of the house, and where the atmosphere is drier. During the winter months great care must be taken not to overwater the plants, or probably the foliage will become spotted and unsightly. The *Cattleya* or intermediate house will suit this *Vanda* during summer, but when at rest the cooler and drier atmosphere of the Mexican house will answer better. The baskets in which the plants are grown should be three parts filled with crocks or charcoal for drainage, surfacing up as near to the bottom leaves as possible with clean, fresh-gathered Sphagnum Moss.

**Cypripedium insigne.**—The well-known flowers of this grand old species are already numerous in collections and a great variety may

winter abundance of light is needed. A very thin compost, consisting of equal parts of peat and Moss over good drainage, suits it well.

**Cypripedium tonsum.**—This is one of the finest *Cypripediums* at this time of year, and I have noted it in flower in a good many collections. It was introduced by chance a dozen or more years ago among an importation of *C. Curtisii* by the collector whose name the latter species bears. The foliage is large and prettily tessellated, the flower-stems being thrown well up. The dorsal sepal is whitish, with lines of greenish purple, the petals somewhat similar in colour, the pouch greenish, with purple and bronze markings. It comes from Sumatra and likes plenty of heat and moisture.—R.

**Oncidium ornithorrhynchum album.**—It is an extremely pretty and rare plant, none the less worthy of care because of the small size of the individual blooms. It is especially beautiful when seen in such form as I noted it in N

asures' collection at Camberwell recently. A remarkably fine specimen plant in the rudest of alth, with large, healthy pseudo-bulbs carrying venteen spikes of snowy-white blossoms, is here bloom. The spikes rise about 2 feet high, are much branched, and carry in the aggregate many hundreds of flowers, the only spot of colour on these being a yellow marking about the crest. This *Oncidium* is a native of Mexico and thrives in a moderately cool, moist, and shady house, being well watered at the roots while growth is active.—R.

## SOCIETIES AND EXHIBITIONS.

### NATIONAL CHRYSANTHEMUM SOCIETY.

NOVEMBER 9, 10 AND 11.

An exhibition of exceptional dimensions and also a thoroughly representative character was got together at the Royal Aquarium, Westminster, S.W., on the above dates. The opening of the exhibition falling on Lord Mayor's day brought together an enormous concourse of spectators, making it an exceedingly difficult task to get a proper view of the many fine exhibits staged. The whole of the ground floor space was utilised, chiefly for exhibits of a miscellaneous character, a few isolated classes only finding accommodation there. Both the galleries were brought into use, that in the south-west containing the leading Japanese classes, and that on the opposite side of the building the Anemones and a large number of the minor classes. St. Stephen's Hall was again requisitioned for the plants, these being arranged round the centre of the building with plenty of space allowed to satisfactorily set them off, fruit and vegetables being on tables on either side of the same building. The large circular groups were arranged, as last year, in the south-west gallery, and these, together with a remarkable display of table decorations, made this portion of the show one of the most interesting. Competition in the different classes was keen. In the open class for twelve Japanese blooms distinct there were no less than twenty-four competitors, and in the open class for three epergnes suitable for table decoration the entries were fourteen. Special mention must be made of the table of vases, &c., arranged by Mr. Norman Davis. This was probably the first exhibit ever put up by a trade specialist, the quality and the arrangement, too, being excellent and certainly meriting the gold medal awarded. Mr. Donald's plants were very fine. The miscellaneous display was very large and varied, and assisted very materially to make the exhibition such a success. The fountains at either end of the building were completely hidden by different trade exhibits, a great advantage from the public point of view.

#### CUT BLOOMS.

The "trophy" class, being the national competition of Chrysanthemum and horticultural societies, is one for forty-eight blooms, to consist of twenty-four incurved, distinct, and twenty-four Japanese, distinct. There were three entries, the Emley and District Chrysanthemum Society winning premier honours with a fine exhibit. The Japanese were large and even, of good form and colour, while the incurved also were large and fairly even. The best Japanese were Duke of York, Mrs. H. Weeks, Viviani Morel, Chas. Davis, International, Mons. Chenon de Léché, Mrs. Elsie Teichmann, G. C. Schwabe, Milano, Simplicity, Matthew Hodgson, and Mrs. Chas. Bek. The incurved were represented by these among others: Chas. H. Curtis, J. Kearns, W. Tunnington, J. Agate, Mrs. R. C. Kingston, Mrs. Coleman, Mrs. Heale, Princess of Wales, and a very handsome bloom of Duchess of Fife. The Singbourne and Milton Gardeners' and Amateurs' Association were second with a fresh and elegant lot of flowers, though smaller. The Holmes' Memorial challenge cups were easily secured by the veteran, Mr. W. Mease, gardener to Mr. Alfred Tate, Downside, Leatherhead, the Japan-

ese class for forty-eight blooms, distinct, containing a magnificent lot of flowers. These were very fresh right throughout. The best were Mme. Carnot, Etoile de Lyon, M. C. Molin, Phœbus, Mrs. H. Weeks, Mrs. W. Lees, Julia Searamanga, Sunstone, Baron Ad. Rothschild, Mrs. G. Carpenter, Modesto, M. de la Rocheterie, Eva Knowles, Mons. Chenon de Léché, A. H. Wood, Edith Tabor, Mrs. J. Lewis, and a very remarkable flower of Yellow Mme. Carnot. This latter bloom was selected as the premier Japanese bloom in the show, and certainly was one of great beauty and refinement. A nice exhibit secured second prize for Mr. Henry Perkins, gardener to the Hon. F. D. Smith, M.P., Greenlands, Henley-on-Thames. Mr. Mease secured the cup for thirty-six incurved blooms, distinct, with blooms of very high quality. The blooms in this class were large, massive, of even form, with splendid breadth of petal, and set up in the most approved style. His varieties were Duchess of Fife, Miss Violet Foster, J. Agate, Miss Dorothy Foster, W. Tunnington, Lucy Kendall, Major Bonallion, Mrs. R. C. Kingston, Princess Beatrice, Violet Tomlin, Lady Isabel, Robt. Petfield, Globe d'Or, Robt. Cannell, Miss Haggas, Chas. H. Curtis, and others. Mr. W. Higgs, gardener to Mr. J. B. Hankey, Fetcham Park, was a good second, many of his blooms being marvels of cultural skill, his flowers of Duchess of Fife, Bonnie Dundee, Robt. Petfield, and Geo. Haigh being very fine. A class to commemorate the 60th year of the Queen's reign was confined to the trade, two competitors only entering. This was for thirty-six blooms, twenty-four being Japanese and twelve incurved, distinct, novelties sent out during 1895, 1896, and 1897. Mr. W. Wells, Earlswood Nursery, Redhill, was first with a nice lot of flowers, but many of the varieties were seen in the leading stands of others. Ella Curtis, G. J. Warren, Souv. de Mme. J. Rosette, and Mrs. F. A. Bevan were among the best of the Japanese. Mr. Norman Davis, The Vineries, Framfield, Sussex, was a good second, John Neville and W. H. Lees being his best novelties in the Japanese. There were only two entries for the Turner Memorial challenge cup, which has to be won by the exhibitor two years in succession or three times in all. In this Mr. Norman Davis showed his superiority by taking leading position with his thirty-six blooms of white, yellow, and crimson Japanese in twelve varieties, three blooms of each. These were noted for their clear and bright colour. R. Dean, John Neville, Miss Dorothea Shea, Beauty of Castlewood among the erimsons; Western King, Mlle. Thérèse Rey, Mme. Carnot, Mrs. H. Weeks, white; and Phœbus, Edith Tabor, Modesto, A. H. Wood, in the yellows, made a fine array of colour. Mr. W. J. Godfrey was a capital second, Sunstone and M. Demay-Taillandier being his most striking flowers. A class for twenty-four incurved, distinct, brought out four competitors, Mr. F. G. Foster, Broekhampton Nurseries, Havant, securing first prize, Lady Isabel, Chas. H. Curtis, Miss Violet Foster, Miss Dorothy Foster, Bonnie Dundee, and Duchess of Fife standing out conspicuously. The second prize went to Mr. H. Butcher, gardener to Mr. C. J. Bass, Lodge House, Smeeth, Ashford, Kent, with a good lot of flowers, J. Agate, D. B. Crane, and C. B. Whitnal being his best. Eight entries for twelve incurved, distinct, made a capital display, and Mr. J. W. Barks, gardener to Mr. Pandeli Ralli, Alderbrook, Cranleigh, was deservedly placed first with Lord Wolsely, James Agate, Empress of India, Violet Tomlin, Mrs. S. Coleman, and Mrs. Heale in neat and good form and well finished. Mr. F. King, gardener to Mrs. McIntosh, Havering Park, Romford, was a good second, with large flowers, but inclined to be rough in appearance. The competition for six blooms, incurved, one variety, is always an interesting one, eleven entries on this occasion being forthcoming. Magnificent specimen blooms of Chas. H. Curtis secured premier position for Mr. W. Tebay, gardener to Mrs. Ryerfort, Everlands, Sevenoaks. These were large, deep and beautifully finished, but the forets were rather narrow.

Mr. F. King was second with the same variety with large flowers and broader forets, but not so even as the first prize stand. There was a falling off in the number of competitors in the class for twenty-four Japanese, distinct, six entries being forthcoming. This is always a strong class, Mr. W. Messenger, gardener to Mr. C. H. Berners, Woolverstone Park, Ipswich, securing first prize with a lot of blooms showing high quality. Conspicuous among them were Mme. Carnot, E. Molyneux, Edith Tabor, Miss C. H. Payne, Simplicity, M. E. André, Australie, Mons. Chenon de Léché, Phœbus, Snowdon, Iolene, and Chas. Davis. Good colour, even form, and fine variety characterised this exhibit. Mr. R. Kenyon, gardener to Mr. A. F. Hills, Monkhaams, Woodford Green, was a good second with Mrs. Hume Long, Mons. Hoste, Australie and Pride of Exmouth in excellent condition. The competition in the class for twelve Japanese, distinct, made a show in itself. There were no less than twenty-four entries, and these made an imposing display. In this Mr. W. Messenger again showed his superiority, although he had little to spare with his nearest rivals. His was a fine stand, Mme. Carnot, E. Molyneux, Australie, Phœbus, E. Tabor, Mons. E. André and International were all examples of high cultural skill. Mr. H. Shoemith was a very close second, this old grower only needing one flower of deeper colour to enhance his chances of success. However, they were very handsome, and included Mrs. J. Lewis, Edith Tabor, Phœbus, Thos. Wilkins and A. G. Hubbuck. For six Japanese, one variety only, white, Mr. Norman Davis showed six of the finest and most even flowers of Mme. Carnot ever seen. They were perfect specimen flowers, fresh, clean, deep, and of exquisite form. Mr. T. H. Lodge, gardener to Mrs. Meritt, Hoekerill, Bishop's Stortford, was second with a nice stand of Mrs. C. Blick. In the class for six Japanese, one variety, any colour except white, Mr. J. McKenzie, gardener to Mr. F. S. W. Cornwallis, Linton, Maidstone, was awarded first prize for Phœbus, in excellent condition, and Mr. T. H. Lodge second for six very fine blooms of Edith Tabor. Mr. W. Robinson, gardener to the Rt. Hon. Lord Ludlow, Heywood, Westbury, Wilts, showed the best six blooms, Japanese incurved, Duke of Wellington, Lady Ridgway, Pride of Madford, Oceana, Australie and Western King being his varieties. The class for six hairy-petalled was poor. Two entries only were seen in the class for twelve large reflexed, showing the little interest felt in these stiff and formal-looking flowers. To Mr. W. Robinson was accorded first position, Cloth of Gold and Cullingfordi being his best blooms. The second prize was won by Mr. G. W. Forbes, gardener to Mrs. Nicols, Regent House, Surbiton. Six competitors were in good form in the class for six large-flowered Anemones, Japanese included, Mr. John Justice, gardener to the Rt. Hon. Sir R. Temple, Bart., The Nash, Kempsey, being a good first. Beautiful blooms of Mme. Lowton, John Bunyan, Lady Margaret, Sir Walter Raleigh, W. W. Astor, Junon, Gladys Spaulding and Queen Elizabeth were typical of these unique flowers. Second honours were secured by Mr. W. Skeggs, gardener to Mr. A. Mosely, West Lodge, Barnet. For twelve large Anemones, Japanese excluded, Mr. Justice was again first against six competitors, with Acquisition, Glück, M. C. Leboeuz, Junon, Mrs. Judge Benedict, Delaware, Mlle. N. Brun, Lady Margaret and Miss Annie Lowe. Mr. A. Ives, gardener to Mr. E. C. Jukes, Hadley Lodge, Barnet, was second, Junon and Descartes being very fine. Twelve Japanese Anemones were a very charming lot, five entries being staged. Mr. Justice was again invincible with a beautiful lot—Mrs. Hugh Gardiner, Robin Adair, Sir Walter Raleigh, Queen Elizabeth, Owen's Perfection, John Bunyan, Enterprise, W. W. Astor, Nelson and Caledonia, each with their disc well developed and their guard forets neatly arranged. Mr. Skeggs was a good second, Enterprise being very good. The pompons were neat and pretty and not over-large. Mr. T. Caryer, gardener

Mr. A. G. Meissner, Weybridge, was a good first, having Prince of Orange, La Vogue, Pygmalion, Mme. Elise Dordan, President, Mr. Holmes, William Westlake, Osiris and others in fine form. The singles were very pretty, though somewhat formally arranged, and, regarding quality, distinctly better than they have been seen. The amateurs' classes were each well filled, blooms of exceptionally good quality being staged. The new arrangement separating the two large classes of amateurs evidently answered very well. The maiden growers' classes, too, were a splendid success, and justifies the executive in retaining them, as there was ample evidence of quality in many of the exhibits.

## PLANTS.

There was a good competition in the group of Chrysanthemums, mingled with fine-foliaged plants, and arranged in circular form 12 feet in diameter. Mr. J. Spink, Summit Road Nursery, Walthamstow, was placed first with a bold and handsome arrangement surmounted by Palms. Good flowers, bright and clean foliage, and general high quality were characteristic of this group. A close second was Mr. W. Howe, gardener to Mr. Henry Tate, Park Hill, Streatham, with a charming arrangement, and with bright flowers and foliage pleasingly disposed of. Mr. D. Donald was the only competitor for six trained specimens, large-flowered varieties, showing ideal plants of J. Lightfoot, J. Shrimpton, Florence Piercy, Col. W. B. Smith, Gloriosum, and W. Tricker. For four trained specimens, any variety, Mr. F. Gilks, gardener to Mr. A. Morris, Court Green, Leigham Court Road, Streatham, was a good first, Emily Silsbury, Col. W. B. Smith, Mrs. E. S. Trafford, and Vivian Morel being his best; Mr. W. Davey, gardener to Mr. C. C. Paine, Hillfield, Haverstock Hill, N.W., being second. For six standard-trained specimens, large-flowered, Mr. Donald was again to the fore, he being the only competitor, Eva Knowles, W. Tricker, Miss Alice Luckman (pale yellow), Cleopatra, Chinaman, and Col. W. B. Smith being splendid examples of cultural skill. Four similar plants were shown by Mr. Davey, and were awarded first prize in the succeeding class. Mr. Donald secured first prize for a single specimen plant for a beautifully fresh and neatly-tied plant of Col. W. B. Smith. For the prize offered by Mr. P. Waterer for a specimen grafted plant, Mr. Donald exhibited Chas. Davis, Vivian Morel, and John Lightfoot on one plant, and secured the first prize. He also won the first prize for six handsome specimen pompons in perfect form, neatly tied, freely flowered, and rich in colour. Sœur Melanie, Black Douglas, William Westlake, Yellow Martha, Antonius, and W. Kennedy were the sorts staged.

## DECORATIVE EXHIBITS.

A table of bouquets, wreaths, sprays, &c., illustrating the decorative value of the Chrysanthemum, brought out a goodly competition. Miss Nellie Erlebach, Chard's The Florist, Stoke Newington, was a good first with neat designs carefully and artistically executed, and showing correct taste and finish. Messrs. Harwood Bros., 176, High Street, Balham, were second with a nice assortment of designs, &c., but lacking the finish which characterised the first prize exhibit. Fourteen competitors entered for three epergnes suitable for table decoration. Mr. D. B. Crane, Highgate, was first. He had a handsome trio arranged with a proper regard for colour. The second prize was awarded to Miss C. B. Cole, The Vineyard, Feltham, Middlesex, for a nice light and graceful arrangement, showing exquisite taste. Two vases of pompons, or Anemone pompons, with foliage made a charming display, Mr. Mark Webster, gardener to Mr. E. J. Preston, Kelsey Park, Beckenham, being an excellent first with elegant sprays of blooms and foliage arranged with great taste in Oriental vases; Mrs. W. Green, jun., Harold Wood, being second with a pretty pair of vases. Mr. Mark Webster was again first with two bouquets, elegantly arranged. Eight entries for a hand-basket of Chrysanthemums,

open to ladies only, made a pretty display. Miss Easterbrook, Fawkham, Kent, showed a pretty basket of pompon Gertie Waterer, a lovely blush sport from Snowdrop. In the open class for six blooms arranged in a vase with foliage, Mr. J. Brooks, gardener to Mr. W. J. Newman, Tottenham Park, was first with fine flowers of Mme. Carnot.

## FRUIT AND VEGETABLES.

For three bunches of white Grapes, Mr. W. Tidy (gardener to Mr. W. H. D'Arcy, Stanmore Hall) was first with nice bunches, Mr. W. Taylor (gardener to Mr. C. Bayer, Forest Hill) being second with heavy bunches. For three bunches black Grapes, Mr. H. Howe was first with large handsome bunches of beautiful colour, and Mr. W. Tidy second. Three bunches of Gros Colman were well shown, Mr. W. Iggulden, Frome, Somerset, being placed in the premier position with handsome bunches, Mr. J. Bury, Petersham Vinceries, Byfleet, Surrey, being second. For six dishes of dessert Apples, Mr. G. Goldsmith (gardener to Sir E. G. Loder, Bart., Horsham) was first with a beautiful lot, comprising Adams Pearmain, Cox's Orange Pippin, Blenheim Orange, King of Pippins, Gascoigne's Scarlet and Ribston Pippin. For six dishes of cooking Apples, Mr. A. J. Thomas, Burgams Hill, Rodmersham, was first with Peasgood's Nonsuch, Bramley's Seedling, Prince Bismarck, Lane's Prince Albert, Cox's Pomona and Warner's King. For six dishes of dessert Pears a grand lot was staged by Mr. A. J. Thomas, who secured first prize. For a collection of nine distinct kinds of vegetables, prizes offered by Messrs. Webb and Sons, Mr. E. Beckett (gardener to the Rt. Hon. Lord Aldenham, Aldenham House, Elstree, Herts) was a good first with splendid examples. These were splendidly staged and were much admired. The second prize was awarded to Mr. E. S. Wiles (gardener to the Hon. E. Hubbard, M.P., The Rookery, Down, Kent), with a clean and nice exhibit.

## MISCELLANEOUS.

Under this heading a fine display was made. To Mr. Norman Davis belong chief honours, the gold medal awarded to him being richly deserved. Chrysanthemums arranged in large vases had associated with them rich autumnal and other foliage. The back was draped to harmonise and the effect was very good. Among the good things we noticed Western King, Simplicity, Mrs. Hermann Kloss, Mme. Carnot, Mrs. H. Weeks, Modesto, Phebus, and many novelties. Crotons, Dracaenas, and Palms were pleasingly associated. Small gold medals were awarded to each of the following: To Mr. H. J. Jones for a very handsome group of Chrysanthemums and fine-foliaged plants, arranged in a graceful and undulating way; Mr. W. J. Godfrey, Exmouth, for a very large table of Chrysanthemums, embracing many excellent new sorts, besides Carnations; Messrs. W. Cutbush and Son, Highgate, for a small group of Chrysanthemums, with a fringe of Begonia Gloire de Lorraine in splendid form; Messrs. H. Berwick, Sidmouth, Devon, for a fine lot of Apples and Pears; Mr. W. Wells, for a splendid group of cut flowers, representing a capital variety of single Chrysanthemums, together with recent introductions in the best of condition; Messrs. H. Cammell and Sons, Swanley, for a superb table of specimen blooms of Chrysanthemums arranged among Ferns, &c., a grand collection of zonal Pelargoniums and Cannas; Messrs. J. Laing and Sons, Forest Hill, S.E., for a fine lot of Apples and Pears, with small groups of Carnations and other plants; and Messrs. B. S. Williams and Son, Upper Holloway, N., for a beautiful collection of Orchids elegantly arranged. A gold medal was given to Messrs. Sutton and Sons, Reading, for eleven heaps and thirty baskets of Potatoes. Silver-gilt medals were also awarded to the Icthemie Guano Co. for their decoration of the southern fountain; Mr. H. J. Jones for a large table of Chrysanthemums arranged in vases and on boards, fine-foliaged plants being dotted all over the table; Messrs. S. Spooner and Son, Hounslow Nurseries, for a beautiful lot of Apples

and Pears; Mr. H. Deverill, Banbury, for splendid display of vegetables; while silver medals went to Mr. Thos. Ware, Tottenham, for Chrysanthemums; Mr. J. Agate, Havant, for Chrysanthemums Mary Molyneux and Mrs. J. Molyneux, recently certificated; to Mr. T. Williams for his pretty little table decoration Mr. R. Owen for Chrysanthemums (both new & choice sorts), Mes-srs. W. and J. Brown for a collection of Apples and Pears, and Mr. E. G. Reel Beckenham Hill, for Chrysanthemums. Mr. J. Shoemith also had four dozen handsome exhibition Japanese Chrysanthemums not for competition.

The floral committee met at the Royal Aquarium Westminster, on Monday last, 15th inst., at 6 o'clock, Mr. T. Bevan in the chair. There was capital lot of novelties, many excellent incurv sorts calling for special notice. The light was none too good by the time the committee finish their labours.

First-class certificates were awarded to the following:—

CHRYSANTHEMUM MASTER II. TUCKER.—A large Japanese incurved with broad florets; color deep crimson-chestnut, with chestnut-bronze reverse. From Mr. H. Shoemith, Claremont Nursery, Woking.

CHRYSANTHEMUM GEORGINA PITCHER.—A very handsome Japanese incurved, with long, broad incurving petals of good substance; colour pale lemon-yellow. From Mr. W. Wells, Earlswood Nurseries, Redhill.

CHRYSANTHEMUM Mlle. LUCIE FAURE.—This welcome addition to the incurved varieties, was neat, incurved and pointed florets; colour pure creamy white. The build of this bloom very much resembles that of Chas. H. Curtis. From Mr. W. J. Godfrey, Exmouth, Devon.

CHRYSANTHEMUM ERNEST CANNELL.—Another incurved bloom of immense size and depth, was neat incurving florets somewhat pointed at tips; colour a pleasing shade of buff-yellow. From Mr. R. Leadbetter, Elmstead Grand Chislehurst.

CHRYSANTHEMUM MRS. G. CARPENTER.—A large Japanese flower with long florets of medium width, prettily twisted. The colour is a pleasing shade of delicate rosy mauve with silvery reverse the colouring paling in the centre. Mr. G. Carpenter, West Hill, Byfleet.

CHRYSANTHEMUM Mlle. LAURENCE ZÉDÉ.—One of the finest of M. Calvat's introductions of the present year. It is a massive Japanese incurved with long, broad, curling florets, slightly hirsute the ends; colour bright rosy lilac with silvery lilac reverse. Sent by Mr. Wells.

CHRYSANTHEMUM EARLSWOOD BEAUTY.—Another beautiful addition, the large single flower having florets of good length and medium breadth. The colour is best described as creamy white, disc being yellow. Also from Mr. Wells.

Matthew Hodgson, a Japanese reflexed, medium size, of the brightest shade of crimson with a bright golden reverse, long and tapering Lady Northcote, a handsome Japanese, with large florets of capital substance, colour white, shaded off to pale rosy blush; Philip Mann, a very beautiful Japanese, with long, recurving golden florets of medium width, colour a lovely shade of deep rosy purple, with silvery reverse; A. W. C. Egan, an incurved bloom of considerable promise, colour white in centre, paling off to rosy-pink at the edges, and Mme. Ferlat, a unique and compact incurved bloom, pure white, florets tightly incurved, the committee highly commended.

They also wished to see again: Mabel Mill a large Japanese Anemone, with long creamy white guard florets with a yellowish disc; Arthur Ray, a pale yellow sport from Mlle. A. de Lambert, and Julia Scaramanga, a Japanese, with long spreading florets of a pleasing shade of bronze.

Mr. P. Waterer, Fawkham, Kent, showed a new exhibition board, and called the attention of the committee to his patent name-ticket holder.

It is a useful and simple contrivance for displaying the names of varieties staged. The names on cardboard slide in and out quite easily, and the whole is fixed securely with a neat little clip to the board. A commendation was unanimously granted to this invention. A small silver medal was awarded to Mr. Wells for the large collection of Chrysanthemums he exhibited.

**PUBLIC GARDENS.**

**CHRYSANTHEMUMS IN THE PARKS.**

**BATTERSEA PARK.**

The greenhouse here is a display of Chrysanthemums, comprising about 2200 plants in 250 varieties that may for all practical purposes be considered one of the best in recent years. The plants are arranged on a wide sloping bank, with paths none too wide for the crowd that passes through the building. The collection contains many first-rate varieties, which have been judiciously arranged with a view to set out to the greatest advantage the many finely-coloured varieties.

These Chrysanthemum shows in the public parks are a valuable object-lesson to the public in the art of flower-growing, but, of course, differ in many respects from the trade exhibitions, where novelties and new introductions mainly form the chief attraction. Still, among the older kinds seen at these County Council displays one can learn much, and the chief lesson undoubtedly is that a very attractive and popular show of the autumn queen can be made with material that an ordinary exhibitor for show has long since ceased to consider worthy of his attention.

In a densely crowded neighbourhood like Battersea difficulties of cultivation are not easily overcome, and only by great energy and unceasing attention can a collection of such extent be brought to anything like perfection, and these difficulties do not appear to have been wanting on the part of those responsible for the exhibition under notice.

The Japanese kinds of course are in the majority, and the first to be noticed are such well-established novelties of American origin as W. H. Lipin, yellow; G. W. Childs, crimson; Eda, pale flesh-pink; W. Tricker, rosy pink, rather like. Others from different sources, but belonging to the same group, although varying in size and form, are M. Freeman, very dwarf and of good size, colour rosy pink; Elaine, once a popular white show variety; Lady Byron, a new arg. white; Alberic Lunden, a fine deep shade of purple; Edwin Molyneux, crimson and gold; and M. Tarin, an old kind, pale rosy pink, and likewise for decoration. In yellows, Sunflower, Palma, and Yellow Dragon, together with some other well-flowered plants of the newer Edith Fair, are all of interest. Duke of Berwick, Marie Hoste, Avalanche, and Mrs. H. News maintain the reputation of the whites, and the crimsons are strikingly beautiful on account of the deep velvety richness of William Seward, John Shrimpton, William Holmes, the old cream Delaux, and several others equally meritorious. Varieties of different tones of purple are only to be referred to by name, Mme. de Bellevue being not the least beautiful. Edouard Auguier is another that was once to be seen on the show board at our exhibitions. M. Garnier, a bright golden yellow counterpart of Edouard Auguier. Gloire du Roehier and Val d'Andorre lead to the crimson-bronzes. Viviani Morel, of a mauve, is large and good, and several massive examples of the old Comte de Germiny, one of the earliest of the Japanese section, are also on view. Other Japanese, such as Charlotte de Montebrier, pink, La Triomphante, with broader core, but similar in colour, and Colonel Chase, of a delicate shade of creamy golden salmon, afford ample proof that the newest introductions are not always the best, and that many of the older sorts can still be used for effect in a

way that leaves little to be desired where softness and delicacy of colour are required.

Among seedlings of M. Ernest Calvat's raising, Louise is particularly noteworthy for size, compactness, and colour, and is almost always uniformly good. President Borel is large and deep in build, the colour being a peculiar mingling of deep rosy purple and gold. Mme. Carnot, a large well-known white, and M. Chenon de Lèché, large blooms of a very rich mixture of cream, golden rose and salmon-buff, both come from the same source and require no criticism. L'Ami Etienne, pale lilac-mauve, very globular, and of good size, is one of M. Calvat's varieties not often seen at the shows, but a very useful one in such groups as the one now under notice.

A few hairy varieties, mostly well-known standard sorts, appear to attract no little attention from the visitors. Louis Boehmer is much in evidence, and its white sport, faintly tinged with pale lemon-yellow in the centre, is in very good form. Hairy Wonder is one of the richest and most effective for large groups; its colour at Battersea is very deep and good, being a dark golden bronze. Esau is a close, compact, globular form, deep rosy pink, with a golden yellow centre, and close at hand we notice the forerunner of the whole hirsute section, Mrs. Alpheus Hardy, of which there are several very well-developed blooms in its peculiarly pure glistening white.

The old type of incurved varieties has many useful examples, although in a public exhibition they do not seem to cause the same degree of interest as the more showy and effective Japanese do. Most prominent in this section are such old-established sorts as Baron Hirsch, Mr. George Glenny (still one of the most perfect), C. H. Curtis (large and very rich in its shade of golden yellow), John Doughty, Mr. Bunn, Lord Wolsley and its relative Prince Alfred, Jardin des Plantes, Refulgens, Globe d'Or, Lord Brooke, the pretty, but medium-sized Mme. Darrier and several of the Queen family, without which no collection of Chrysanthemums can be regarded as thoroughly representative.

On the large bank are several fine plants of that charming little pompon, Mme. Elise Dordans, a variety that in our opinion has no equal. Other sections, such as the reflexed and Anemone-flowered varieties, are not wanting. In the first-named, Dr. Sharpe (an old-time favourite) is always welcome, while in the latter we noticed Descartes, a large, bold-looking, wine-coloured variety, with long guard florets and a velvety-looking shade of colour that makes it a valuable acquisition. Delaware, too, is not new, but it is of some value; colour white, with a yellow centre. Then in the same section come M. Charles Leboeuz (pale ochre-yellow) and John Bunyan (deep golden yellow).

**SOUTHWARK PARK.**

The collection of Chrysanthemums in this park, which is situated in a locality that is densely populated by the working and riverside labouring classes, is arranged with considerable taste in a T-shaped greenhouse. The plants are arranged on two sloping and serpentine banks with a winding path of good width down the middle. Interspersed are a few Palms, &c., to give effect to the display. If Battersea is an undesirable quarter of London in which to grow the famous autumn flower, we should think that Southwark is still more so. The disadvantages under which the collection at Southwark Park consist of want of pure air and an indifferent light, and these are manifest in the paleness of colour in some of the blooms of Etoile de Lyon, Charles Davis and Viviani Morel, but with these few exceptions the colouring of the others leaves little or nothing to be desired. Here, as elsewhere, the Japanese predominate, and offer most that is attractive both in size and colour. Some of the early October ones are rapidly passing their best, but the bulk of the collection will be in condition for some time to come. Large and well developed are the well-known Etoile de Lyon, Rose Wynne, Viviani Morel, Mrs. E. G. Hill and Louise, of the last named there being some very pretty pale bluish-

coloured blooms of good size and substance. This variety wherever seen seems to be uniformly good, and, indeed, is one of the most valuable of its type. We notice, too, Mlle. Lacroix and its pale yellow sport Mr. C. E. Shea, and close at hand several good crimsons, as G. W. Childs, J. Shrimpton and W. Seward, the last-named being very bright. Col. Bourne is another bright-coloured kind, and so, too, is Gloire du Roehier. M. Geo. Biron is a deep crimson, with golden reverse, and Alberic Lunden, a finely-formed, medium-sized purple-amaranth variety, is also very effective. A new yellow variety, Marjory Kinder, shows that English seedlings can hold a foremost place in spite of severe competition. It is large in size, incurving in build, and is of a very pure deep golden yellow. Florence Davis, with its peculiar greenish tint, is small, but the bright pink Wm. Tricker helps to brighten up the group in many places. So, too, does Puritan, large and massive and of a pale pink-mauve shade. There is a good proportion of large-sized whites, of which we notice Condor, once and for a short time popular on the show boards, and which was sent out by the same raiser as Etoile de Lyon; Mme. Carnot, Emily Silsbury, very large and good; Lady Byron, incurving in form, deep and solid; Mrs. H. T. Drewitt, Miss Elsie Teichmann, creamy white; Mrs. C. Blick and the old Lady Selborne. In yellows, Colonel W. B. Smith, Abbé Mendenhall, Sunflower, Gloriosum, Phœbus and Duchess of Wellington strike us the most, not forgetting Edith Tabor, of more recent introduction. For a good solid, incurving, globular Japanese of a golden yellow shade there are few to equal J. H. Runchman. Edouard Audiguier, deep purple-plum colour, with a silvery reverse, is very rich, and good use is made of La Triomphante, a well-known seedling of De Reydellet's, rosy pink and very attractive in a mixed collection. President Borel, purple-rose and gold; Mme. Ed. Rey, Charlotte Montebrier, pale pink; Hamlet, a beautiful shade of cerise-salmon, reverse golden; Prefet Robert, purple-amaranth, with reverse of silver, incurving and globular, and l'Ami Etienne, also large, round and compact, and of a rosy-pink shade, all commend themselves to the visitor's notice.

In incurved, the Southwark collection contains C. H. Curtis, M. R. Bahuant, large and of fine form, and Baron Hirsch in goodly numbers. Older sorts, such as White Beverley, Prince of Wales, Lord Wolsley, Refulgens, Prince Alfred, and Mr. Geo. Glenny, are well represented, not of course omitting Queen of England, Lord Alcester, and Pink and White Venus. Some years ago a capital collection of hairy novelties was exhibited at Southwark, and caused much interest. The collection at the present time does not apparently contain so many of these, but the section is represented. Quite distinct in this section is Mrs. H. Caldwell, which has very long tubular rigid florets, colour pale straw-yellow. Sautel 1893 is a fine one, for it is large, of the Japanese incurved form, and of a pretty deep rosy-pink shade, with a silvery reverse. Mrs. Dr. Ward, ochre-yellow, completes the number. Mrs. Judge Benedict, an Anemone with a yellow centre and disc of pure white flat guard florets, and Mlle. Cabrol, also a Japanese Anemone, with a few of the better-known pompons lend a charm to the display.

**WATERLOO PARK.**

Something like 1700 plants are grown to make the display here. The plants are housed in a large and lofty conservatory, in bold and handsome groups gently sloping to the front, and showing considerable taste in their arrangement and the association of the different forms and colours. Beyond this a long and disused viney also holds a fine lot of plants, with a continuous sloping group the whole length of the structure on one side. The colour seems to strike one forcibly as being much better than usual, this probably being accounted for by the buds having been retained somewhat late in the season. At the time of our visit the display was at its best, splendid examples of the Japanese sorts being

much admired. *Phœbus* (one of the best yellows) was very good; *Amos Perry* (another yellow) also is in fine form this season. Pretty little plants of *Souvenir de Petite Amie*, each carrying a number of blooms of a useful size, were often in evidence, while both *Vivian Morel* and *Chas. Davis* were remarkable for the splendid colouring and their handsome proportions. *President Borel* (bright carmine-rose, a popular variety of a few years back) was as good as we have ever seen it, both the length and breadth of the petals and the finish of the blooms comparing favourably with those of many of the newer introductions. A pretty flower is *Comte F. Lurani*, rose, striped white. This is an excellent sort for grouping, and a very easy sort to grow, too. Older sorts, such as *Mrs. C. Harman-Payne*, *J. Shrimpton*, *William Seward*, *Commandant Blusset* and *Mlle. Thérèse Rey*, were represented by clean and even flowers. Of the newer sorts, the best were *Lady Byron*, a large and handsome white Japanese of chaste appearance; *Edith Tabor*, a lovely soft yellow, of beautiful form; *Hairy Wonder*, particularly good; *Modesto*, a new incurved Japanese of deep rich yellow and most striking in the group; *A. H. Wood*, a beautiful yellow sport from *Primrose League*, and coming good this year; *Sunstone*, a promising flower of clear light yellow; *Mrs. Richard Jones*, pure white, large and of good form; *Western King*, a new American white incurved Japanese of the most chaste description; *James Bidencope*, a large rosy amaranth flower with silvery reverse, and a nice lot of late flowers of the lovely white *Mme. Carnot*, certainly the best of that type of the flower. Incurved varieties are somewhat largely grown here, splendid blooms of *Chas. Curtis* being always in evidence. *Mme. Darrier* (nankeen-yellow, very neat flower), *Mrs. R. C. Kingston* (white, tinted lilac-pink, splendid form), *Lord Alcester* (very fine), *Baron Hirsch* (the cinnamon-buff flower) and the different members of the *Rundle* family—*Mrs. Geo. Rundle*, *Mrs. Dixon*, *Mr. Geo. Glenny* (by far the prettiest flowers in the incurved section)—each assisted to make a pleasing variation. A nice lot of pompons is always accorded a welcome here, and a batch of plants of the best decorative sorts also receives a share of attention, and assists very materially to prove the value of the *Chrysanthemum* when grown in a free manner.

#### FINSBURY PARK.

Here all sections are well represented. Not only are the different types of the *Chrysanthemum* seen in excellent condition, but a delightful way of arranging the plants has been carried out. In the *Chrysanthemum* house the plants are grouped in a long series of semi circular bays, the background being made up of pretty decorative varieties, such as old *l'Île de Plaisirs*, with its narrow florets, crimson and golden yellow in colour. The groups slope gently down to the front, this being finished off with a capital lot of dwarf pompons, *William Westlake* (lovely yellow) and the old *Sœur Melanie* (white) being alternately used. The upright supports to the roof are to a large extent covered in with freely-flowered specimens of *Margot*, this old salmon-pink variety having preference given to it because of its keeping qualities. Old sorts which were doing well were *Etoile de Lyon*, in the best possible form; *Madame Rozain*, a refined Japanese incurved of pearly-pink; *Miss Margaret*, a free, large *Anemone* with pink guard florets and sulphur disc. *Golden Gate*, the late tawny-yellow Japanese, was growing in a free manner—quite unusual for this sort. *Miss Elsie Teichmann*, the delicate pearly-white, was in fine form, its fine habit being a point in its favour too. *Phœbus* is thought highly of here, and was doing very well. *Niveum* was represented by the purest white blossoms of grand substance. *Chas. H. Curtis*, the popular yellow incurved, was seen in neat and even specimens from late buds. A large batch of the American novelty *Philadelphia*, with its pale sulphur-yellow blossoms, seems to be appreciated here, and although not equal to the specimens sent over to a show of the National *Chrysanthemum* Society a few years ago, it is to be seen in

very fair form. *Mrs. E. G. Whittle*, with large Japanese flowers resembling in colour a beautiful *Malmaison* *Carnation*, deserves extended culture. *Miss Phyllis Fowler*, a beautiful yellow sent out as an incurved, seems too rough, even from late buds, to make a typical incurved bloom. *Shasta*, a charming white variety, with very neat tubular petals, was quite unique, and was always in evidence. *Edith Tabor* was also most effective, and the lovely *Mrs. A. H. Neve* is pleasing both in form and colour. *Australie*, the massive Japanese incurved, was represented by magnificent samples of high culture, its colour of rosy amaranth and silvery reverse being seen to advantage. *Western King* among the new sorts was specially noticeable, its large and chaste white Japanese incurved blossoms calling for special praise. Among the incurved sorts, *Mrs. R. C. Kingston* was in exquisite form, the flowers being neatly formed and of large size. *Globe d'Or*, *Princess Teck*, and *Barbara* were also freely distributed among the Japanese sorts, and the contrast most effectively brought about. Other Japanese varieties in good form were *Vivian Morel* (splendid colour), *Florence Davis*, *Louise*, *Marquis de Paris* (large white), *R. Owen* (neat flowers), *M. Pankoucke*, *Gloriosum*, *T. Wilkins*, and *Mlle. Marie Hoste*. The large conservatory was also requisitioned for the display, quite a large number of plants being pleasingly disposed among the fine-foliaged plants there. Singles were represented by the enormous blooms of *Sunset*, not by any means pretty, and by the charming flowers of the blush-tinted *Miss Mary Anderson*.

### NOTES OF THE WEEK.

**Chrysanthemum Golden Elsie.**—This is a very pretty variety with good light upon it, but at eventide the yellow shade pales to such an extent as to render it scarcely recognisable. For evening use the orange-gold shades are much the best and most effective.

**Hydrangea Hortensia.**—Some capital bushes of this were still yielding satisfactory heads of blossom in the open a few days since, some of the shoots apparently of the current season's growth, since the larger heads that made so fine a display a few weeks since have all but perished.

**Chrysanthemum Royal Standard.**—This variety would appear to be one of the finest of its colour, as recently seen at the Drill Hall, where its crimson-maroon shade shone out conspicuously against flowers of lighter hue. The blooms are very handsome and of fine proportions.

**Gaura Lindheimeri.**—If the gathering of the blossoms of this plant, as shown by *Mr. Ladhams* at the Aquarium show, at all indicates the general behaviour of this plant, then it must assuredly be flowering as freely as it does in the summer, since the plant was represented by a good-sized sheaf of its spikes.

**Dracæna Doucetti.**—A pair of exceedingly well grown plants of this were very conspicuous in a group of well-grown stove and greenhouse plants last week at the Royal Horticultural Society's meeting. The examples were faultless throughout, and being some 6 feet or 7 feet high stood out grandly at the corners of a fine variety of plants.

**Bougainvillea spectabilis.**—Quite recently we noted a large example of this flowering abundantly in the somewhat cool company of *Cacti* and *succulents* generally in the large house devoted to these things at Kew. The quantity of the flowers was in itself an attraction, while the colour was decidedly deeper than is the case when the plant is subjected to a much higher temperature.

**Saxifraga cortusæfolia.**—This late autumn-flowering species belongs more or less to the same category as *S. Fortunei*, while it is generally more hardy than this and less fleshy in its leaves and stalks. It is worthy of more attention for its late-flowering, and with deep soil and a sheltered position in the rock garden the tuft of white flowers is very pretty during the early summer and autumn.

**Cereus rostratus.**—For a long time past this handsome species has been flowering in the succulent house at Kew, where a very fine example is

trained to the roof. In this position ample light and sunshine are afforded the plant, and the numerous creamy white blossoms appear in profusion week by week. Some of the largest flowers we measure from 8 inches to 10 inches across.

**Galanthus octobrensis.**—This interesting variety appears to be lacking in one important quality, viz., constitution, so far, at least, as culture is concerned, in some gardens in the south of England. Indeed, some small clusters that a year ago had quite a nice display of blossoms and were then supposed to be fairly well established, have scarcely made their appearance all this season, the growth being much weaker than hitherto.

**Vinca acutiloba**, given to me by the late *Harpur-Crewe*, seems to be little known. It has large delicate pale blue flowers, and always remains in full beauty through the greater part of the winter. *Solanum jasminoides*, *Eccecropus scaber*, and *Abutilon vexillarium* are quite fresh, and *Clematis calycina* has already opened some of its flowers, and large plants of *Erica codonodes* are in full flower.—*T. H. ARCHER-HIND, South Devon.*

**Chrysanthemum Jules Lagravere.**—This old crimson variety is not now very frequently seen, the many recent novelties having in probability displaced it. At the same time it is worthy of note that it possesses a hardy, vigorous constitution, sufficiently so to come up year after year in the open garden. For these reasons it is worth retaining as a parent to raise other good hardy sorts from, such as are capable of taking care of themselves in the open.

**Seedling Nerines.**—One of the most brilliant coloured forms of this group was a seedling of *Mr. Elwes*, recently noted at the Drill Hall. It stands by side with the most brilliant forms of *N. Fothergilli*, it surpassed them in the intensity of its colour, which was of vermilion-scarlet hue, the truss large, as though *N. Fothergilli* had one of its parents. Very remarkable, too, the length of the stamens, these being of the same shade as the segments of the perianth.

**Convolvulus Cneorum.**—I do not remember to have seen this plant noticed in *THE GARDEN* and yet few are more beautiful and striking. I cannot say it is quite hardy, but I have had it many years in my garden on a warm border. This full season is in spring, but it flowers in autumn also, and now, in the middle of November, I have a large bush 4 feet or 5 feet high in great beauty and it will continue to expand its lovely pink-tipped blossoms till a severe frost comes to check it.—*T. H. ARCHER-HIND, South Devon.*

**Royal Horticultural Society.**—The fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 23rd, at the Drill Hall, James Street, Westminster, 1 p.m. At 3 o'clock a lecture on "Horticultural Exhibitions, Schedules, &c.," will be given by *John Wright*.

#### BOOKS RECEIVED.

Catalogue of plants at La Mortola, near Vigonza, Italy. Commendatore *Thos. Hanbury*.  
"A Text-Book of General Botany." By *Chas. Curtis*, Columbia University. London: Longmans, Green, and Co.

**Names of fruit.**—*B. B.*—1, Pear Marie Louise; 2, Apple Norfolk Beaufin.—*J. R.*—Impossible to name from part of an Apple only.

**Names of plants.**—*B. J. P. Bastard.*—1, *Caper Spruce* (*Euphorbia Lathyris*).—*Miss Young.*—A small flower of *Crocus speciosus*.—*J. C.*—1, *Abies numidica*; 2, *Abies Nordmanni*; 3, *Cedrus Deodara*; 4, *Cedrus Libani*.—*Com Reader.*—*Eryngium bromeliæfolium*, or some other species.—*Miss Yule.*—*Escallonia macrantha*.—*V. W.*—1, *Andromeda* sp.; 2, impossible to name from specimen sent. Please send when in flower.—*Springhill.*—1, *Lissocichlus* sp.; 2, *Dendrobium nopsis Schreoderianum*; 3, *Cattleya Trianae*; 4, better specimen.—*W. O.*—*Muhlenbeckia com.*

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## CHRYSANTHEMUMS.

### GOOD SHOW FLOWERS.

Among the many striking sorts of Japanese Chrysanthemums more generally found in competition stands at the exhibitions recently, Australia was one of the most conspicuous. The colour, silvery lilac, is bright, and its shape distinct. The broad massive florets fall in all directions, and yet give a bloom of perfect outline. Australian Gold, about which so much has been written, is a magnificent bloom. It is a solid mass of interweaving florets of a purple-yellow shade, full, deep and rich. Charles Davis, now so well known, was abundantly represented, but the blooms did not appear quite up to the standard of those shown a year or two ago. Fine blooms of Edith Tabor were noted everywhere. It is a particularly handsome bloom. Edwin Molyneux, the most showy of crimson kinds, cannot be beaten. Eva Knowles has flowers of a distinct scarlet shade. This was seen in fine form in several instances. A sort usually coarse, namely, International, is a very fine flower when in the condition noted this season. The colour is salmon-pink tint, and the long florets hang down in a graceful way. Lady Hanham, a charming flower, is a sport from Vivian Morel, that I thought would not prove sufficiently distinct, but it is. The colour is a soft salmon-red, and it retains the fine formation and size of the parent. Mme. Carnot is undoubtedly the best white show Chrysanthemum. This was in evidence at all competitions. Mme. Gustave Henry is a very fine white of incurving form. This is easily grown, and is a distinct one. Mlle. Thérèse Rey was seen in finer form at country shows than in London, and is very striking in the excellent substance of its florets.

That splendid yellow, Modesto, appeared somewhat loose in build this year. Last season it proved to a solid centre. But in any shape

the flower is most telling. M. Chenon de Léché was represented by blooms of many shapes—that most effective was when all the florets reflexed and gave the rich colouring for which the sort is noted. M. Ed. André bears carmine-salmon blooms. It is very rich. The flowers are large and of pretty form, and it should be extensively grown for show. Mr. A. G. Hubbard, like the last named, can hardly be classed with those most generally seen, but it is so showy as regards colour that too much cannot be written of it. A very handsome bloom wherever met with was Mrs. H. Weeks. The florets are wide, of exceptional substance, usually inclining to the centre and forming a solid mass. Few blossoms have the remarkable beauty of this Chrysanthemum and its being so often seen, whilst but recently introduced, is something in its favour. Miss Elsie Teichmann is a splendid variety. The florets have a parchment-like texture, very rich, and when seen with a pink tint the flower always finds admirers. Mutual Friend has fine white blossoms, but these are somewhat flat. It is, notwithstanding, one of the choicest show kinds. Perhaps the most remarkable Chrysanthemum of recent years is Oceana. It is yellow and has florets so thick that they seem proof to damp. In fact the blooms last longer than those of any sort I know.

Phœbus was the best exhibited of any variety this year. Time after time it was the winning one in the class devoted to half a dozen blooms of one sort, as well as being judged the premier bloom of a show very frequently. Pride of Madford is not a good sort to keep, otherwise it is a most constant and handsome flower. A refined white is Simplicity. This will be very popular. Thomas Wilkins has blooms of a telling bronze shade and the form is good. Vivian Morel in its shade is very fine, although the blooms are not so good as seen a year or two back. H. S.

**Yellow Japanese Chrysanthemums at the National Chrysanthemum Society's show.**—It was

exceedingly interesting to note the names of the yellow Japanese sorts exhibited at the late show at the Royal Aquarium, as showing the change which each season takes place. Judging by results, a variety has a very short lease of popularity unless it possesses some distinguishing characteristic or has high quality. Phœbus was seen in magnificent form, flowers of great depth, rich colour, and splendid petal being seen over and over again. Edith Tabor (a most distinct yellow flower) was represented frequently by typical blossoms; Modesto, one of the newest of the yellow sorts, and of a particularly deep rich shade of that colour, has already found favour, its large and handsome flowers creating a splendid effect whenever staged. A. H. Wood (the yellow sport from Primrose League) was also often in evidence, this variety appearing to have developed very handsome flowers this season; and the yellow sport from Mme. Carnot, as seen in Mr. Mease's stand, and which was selected as the best Japanese bloom in the show, will long be remembered as an ideal Japanese flower.—D. B.

### CHRYSANTHEMUMS AT WOKING.

THE name of Mr. H. Shoemith, an old exhibitor, is by no means unknown to the readers of THE GARDEN. Having established himself at the Claremont Nursery, Woking, some time since, we have only just had our first opportunity of paying him a visit, and, as we expected, found him growing a very select and well-chosen collection of the best of the most recent introductions, although we were not a little disappointed to find the old florists' type of incurved considerably in the minority, so far as plants in flower were concerned. Situated away from the town, Mr. Shoemith's nursery occupies a very open position, and one that is no doubt conducive to the best results in the cultivation of the Chrysanthemum, of which he has some 200 or 300 varieties. He also grows zonal Pelargoniums with success, and of these there was a very bright display at the time of our visit. Other plants suitable for general purposes are not neglected, but at this season of the year the Chrysanthemum of course claims the premier position. Taken as a whole, the collection is beyond the average trade display, a large proportion of the plants being grown solely for the

production of fine specimen exhibition blooms, and not, as is sometimes the case, merely to produce a general effective display. Quality rather than quantity would seem to be Mr. Shoemith's motto, and with this in mind, our first inquiry was as to the relative merits of the season's novelties, to which his reply was very decisive and to the following effect, that he considered those received from M. Ernest Calvat to be of the highest order, and that the eminent French raiser had far outdistanced the whole of the other raisers of the same nationality. Certain it is that the Claremont nursery possesses a very choice collection of the Calvat seedlings, not the least interesting being those of most recent introduction. Among them, N.C.S. Jubilee is very large and finely developed, an incurving Japanese, colour lavender-pink, with silvery pink reverse. Mme. Gustave Henry is a beautiful white incurved Japanese, and Ma Perfection, of the same colour, but more nearly approaching the old type of incurved, comes from the same source. Lucie Faure is a grand addition, one of Calvat's very best, a large, solid, compact Japanese incurved, also white. Then we notice Mlle. Lawrence Zédé, very full and double, broad grooved florets, colour a beautiful shade of rosy mauve, with a reverse of silvery pink. Mme. Ed. Roger, the new green variety, is also in evidence; and not the least imposing among other white varieties are Baronne Ad. Rothschild and Mrs. J. Lewis, the latter of which is destined to become a very favourite variety. A variety of M. Calvat's that we do not remember having seen before is C. Delamotte, a big Japanese incurved with grooved florets, deeply built and of a rich golden yellow, just one shade paler than the American variety Modesto. M. B. Verlot (delicate rosy pink), Mme. X. Rey, Jouvin (pinkish mauve), Australian Gold, M. Chenon de Léché (enormous in size and beautiful in colour), and Perle Dauphinoise (golden buff, incurved, with pointed florets) must complete our notice of the Calvat seedlings, which are done as well here as anywhere we have seen.

Of others in fine form Phœbus deserves a special mention, for there are several blooms of it that are simply superb. Modesto is large, rich and good; Western King, Mrs. H. Weeks, Lady Byron, Mutual Friend, and Mrs. C. Blick among whites need no recommendation beyond a mention of their names. Mr. A. G. Hubbuck, a fine Japanese with long drooping petals, colour bright brick-red, is also good. The Australian novelties Oceana, Australie and Pride of Malford are immense in size and already well known. Lady Saunders, pale sulphur-yellow deepening towards the centre, and C. W. Richardson, of a rich golden-yellow, large and massive, are both exceedingly well done, but G. J. Warren, the pale yellow Carnot sport, will perhaps stand first in the list of the 1897 yellows. At any rate there will be only one serious competitor, and that is an unnamed pale sulphur-yellow sport from Vivand Morel that has just come into Mr. Shoemith's possession, and which promises to be quite as fine and as useful for exhibition as either Charles Davis or Lady Hanham. Sunstone is another yellow, very large and of an apricot shade. A. H. Woods is also a yellow, pale but clear. Master H. Tucker is a Japanese incurved, very rich velvety deep red inside, reverse golden-bronze, a large striking flower.

**Pompon Chrysanthemums.**—The rage for large blossoms of all kinds of Chrysanthemums still continues, and extends even to the pretty little pompon varieties, for the prizes are, as a rule, awarded to the largest flowers. At the recent Aquarium exhibition the pompon varieties were shown in threes, and the plants had been so rigidly disbudded, that each shoot carried but a single flower. These blooms were all fully expanded, with not a trace of a bud or partially opened flower to be seen. A board of pompon varieties is just as artificial as when furnished with the larger flowers, and pretty much the same may be said of the single forms, which grown naturally are very beautiful, but the fashion is

now to disbud them far too much. A few sprays of either of these with their blossoms in various stages of development are infinitely far more pleasing than the stiff, formal flowers as now shown. That favourite pompon variety, Mlle. Elise Jordan, which blooms profusely when grown as a bush, was disbudded to a single flower on a stout erect stem, and in this way it looked more like an arrangement for cleaning lamp-glasses than a pretty variety of Chrysanthemums.—T.

#### CHRYSANTHEMUMS AT LEWISHAM.

Mr. JONES, of the Rycroft Nursery, Lewisham, is known far and wide for the very fine displays that he makes at our exhibitions, and for the indefatigable manner in which he has worked to improve and popularise the autumn flower. In the two largest show houses at Rycroft, which are at the present moment filled with an immense number of Chrysanthemums in full bloom, are some very fine novelties of various kinds, the English, American, French and other raisers being all more or less well represented.

Home-grown seedlings find a fine addition in Mrs. L. Humphrey, a large, pale primrose seedling Japanese, which will be distributed next spring. Pride of Exmouth (large white) and G. J. Warren (the beautiful Carnot sport) are also in fine form. Mrs. Cotesworth Bond (a very delicate pale pink Japanese with large drooping florets, curly at the tips) is of great promise. Mrs. C. Orchard (pale sulphur-yellow), Lady Hanham (the new sport from Vivand Morel already described in these pages), Lady Isabel (the large new incurved), and many more besides all attest the up-to-date condition of the Rycroft collection. A few well-known and good varieties, such as Dorothy Shea (very fine in colour), Emily Silsbury, Lady Ridgway, Edith Tabor, A. H. Woods, Lady Byron, Miss Elsie Teichmann and Pallanza, will show that foreign growers do not alone receive attention at Mr. Jones' nursery. American novelties of recent introduction are well shown in Western King (the fine white Japanese incurved seen everywhere), Sunclad (pure golden yellow), Good Gracious (curious in its twisted narrow florets of pale pink), Simplicity (a lovely new white), Mutual Friend, Modesto, Snowdon, Lenawee (pure pearly pink), Autumn Bride (a very white Japanese) and several others.

Calvat's seedlings—M. Chenon de Léché, Louise, Amiral Avellan and the newer N.C.S. Jubilee, which is very fine—are all perfect specimens. So, too, are his Australian Gold, Ma Perfection, Mme. Carnot and the curious green variety Mme. Ed. Roger. From the same source come also M. Hoste, large white; M. B. Verlot, quite new this year, a fine Japanese incurved, colour deep rosy lilac, with reverse of silvery pink. Mme. Gustave Henry is large and good, and C. Harman-Payne, seldom seen in this country in anything like fair condition, is one of the best blooms we have seen. M. Ed. André, Mme. Berger, Werther and most of the old standard varieties of M. Calvat's are included in the collection. Mrs. G. W. Palmer and Mme. Eugène Testout, both sports from Mrs. C. Harman-Payne, do not seem to be synonymous, the former being very much deeper and brighter in its colouring of rosy purple and bronze. Triomphe d'Eve is an incurved white variety of very good form, and General Mauric belongs to the same category, but is prettier, being of a bright golden yellow in the centre, the outer florets bright pinkish rose. Oceana, the Australian Japanese incurved, is a grand pure yellow variety, and in size Australie is even superior, although its dull purplish colour is far inferior and its size alone will commend it to many exhibitors. Crown of Gold is one of Mr. Shea's seedlings, a fine large Japanese, with curly incurving and intermingling florets, colour deep golden yellow. Master H. Tucker is a reddish velvety crimson, shaded gold. Another Rycroft seedling of great size is W. Wright, certificated late last season. It is very large and has florets of immense length, the colour being white, shaded purple. Various shades of yellow may be

found in Lady Oporto Tait, large and globular King of the Buffs, Pride of Rycroft, a pure sulphur-yellow sport from Niveum; and C. Richardson, a big compactly-built Japanese incurved with grooved florets.

One of the old type of incurved may be found in Lady Gormanston, a colonial seedling of pure white and of very good form. M. Desblanc belongs to the same section, and is reddish-crimson with reverse of gold. In the incurved section may be mentioned Emile Nonin, Continental novelty, very regular in build, and a deep golden chestnut-bronze. Rena Duk, small, deep rose, tipped white.

In the Anemone section, Mrs. Caterer, a large white; Mrs. P. R. Dunn, same colour, but with the disc slightly tinted; and Mabel Mitchell, creamy-white, with a yellow centre, very large are the most conspicuous. Hairy novelties also to be found, but of these Hairy Wonder seems to be the best and most distinct. W. Louis Boelmer probably ranks next in popularity.

Like most of the trade displays this year, Mr. Jones' collection is chiefly made up of the Japanese type, other sections not being so freely played, although a stock of everything that is useful and good is kept up. Mr. Jones' collection, in spite of the serious disadvantage of illness for several weeks just before the beginning of the Chrysanthemum season, is in much better condition than we expected to find it. The collection is so extensive and so thoroughly representative, that it is only possible to give just briefest mention of all the good things to be there.

#### CHRYSANTHEMUMS AT BYFLEET.

At Westhall, Byfleet, the residence of Mr. St. John, the Japanese varieties are this season very large, the blooms being of great size, some of them exceptionally large, fine in form and colour. A striking one in this respect is Mme. Ricard, which carries immense blooms, the only defect being that they are rather too globular, and therefore somewhat formal-looking. Mrs. J. Lewis, or last year's novelty, also carries exceptional large blooms, and on this account is likely to be much in favour with exhibitors. Mrs. Carpet also a novelty, is very distinct, the bright shade of pink which characterises the flowers at its best being very pleasing. One of the most distinct in this section is M. Chenon de Leche: a mixture of apricot and sulphur-yellow renders flowers of this kind very attractive, and as blooms of high quality can be had on plants about 4 feet high without cutting down, this Chrysanthemum is likely to become a favourite for decoration. Fortunately the number of Japanese varieties do not exceed a height of 5 feet is increased, and in time we shall probably witness the extinction of those that must be allowed to grow above the tallest man's head to secure blooms of the highest quality. Miss Elsie Teichmann, creamy white; Lady Saunders, primrose; Aphisto, H. L. Sunderbruch, yellow; Lotus, bluish-pink; Mrs. F. Jameson, and Calvat's Boule d'Or produce flowers fit for exhibition stems from 4 feet to 5 feet high, and can therefore be accommodated in houses of quite limited dimensions where the tall-growing varieties are inadmissible. Edith Tabor and Modesto are in grand form at Westhall, and it will probably be some years before they are supplanted by varieties of superior quality. Hairy Wonder, the best in this class, is worth growing on account of its distinctness, but these hairy Chrysanthemums have to be much improved as regards colour before they become really popular. Souvenir Petite Amie, grown either for large blooms or bush form for cutting, is still one of the best of colour.

Among the incurved varieties, Golden Empress and James Agate are very conspicuous, the latter carrying magnificent white blooms, perfect form and of great size. Those who care for singles should make note of Annie Tweed which produces crimson blooms in great profusion, the inner petals of a lighter tint. Mr. Carpet

plants much of this for cutting, the flowers being effective in artificial light. King of the Plumes and Nocce d'Or are both distinct free-flowering plants, very useful for cutting. J. C. B.

### CHRYSANTHEMUMS AT SYON HOUSE.

CHRYSANTHEMUMS are not grown at Syon specially for exhibition, though, as is well known, many of them may be termed show blooms; indeed, some splendid flowers have this season been shown at the meetings of the Royal Horticultural Society at Westminster. Mr. Wythes does not grow for the usual mode of staging on flat boards, the flowers are shown with long stems on a framework of small plants, and most effective by arc, especially when the foliage is good. The 1500 plants are grown, 1000 as cut-backs, the blooms to a plant, and 500 as bush plants. These are mostly late kinds, about 100 only being early varieties. One of the best early kinds is Lady Mary Fitzwygram, the others being singles, My Anderson and Miss Rose being special favourites. The cut-back plants are staged in pot fruit houses at rest, not the best possible position certainly. The plants are well furnished with healthy foliage, and though the fog of the last few days has in a measure dulled the blooms and caused very many to damp, specially the curved types; there are later flowers which will give a good display for some time; indeed, the aim here to have the Chrysanthemums in quantity from September till the new year. Attention must be made of a few special flowers, though with such all-round good quality it is difficult to individualise. The old but still good King of Arc is very fine, the blooms large and perfect in shape. Brookleigh Gem is also excellent. Globe d'Or, a beautiful flower. Baron Hirsch is very fine, though some of the best blooms when shown were past their best. Lord Alcester, M.R. Bahuant, C. H. Curtis, Robert Cannell, Queen of England, Empress of India, Mr. Tunnington, Bonnie Dundee, Miss Violet Tomlin and Mrs. S. Coleman are specially good. Of course there is a much larger number of varieties in the Japanese section, and the collection includes a few of the varieties of great merit. International is a splendid flower of great depth. Many are charmed with the peculiar tint of H. L. Sunderbruch, a very large flower and a true Japanese. Lady Edolph is charming and a good-shaped flower; colour amarant-h-crimson, with silvery reverse. A trial is promised to make a grand flower and is a true grower. Kentish Yellow is one of the best novelties, with a charming shade of colour, and a sturdy grower. Lago Maggiore is another fine variety of good substance. Col. W. B. Smith is very fine, also C. Harman-Payne and Beauty of the South. Lady Esther Smith, a grand white bloom and a very perfect flower, is a favourite, and the well-formed Louise, a soft pink and very dwarf in growth. Elaine and Fair Maid of Gorse have been excellent, also Edwin Molyneux, not always an easy flower to finish. Eda, Mrs. John Lightfoot, Sunflower, Wm. Seward, M. C. Shea, Mme. Carnot, W. H. Lincoln, W. Tricker, W. H. Fowler, Vivand Morel, Philadelphia and John Shrimpton are all worth notice for their shape, size and colour, and sturdy growth. For late cutting W. H. Lincoln is a favourite variety, and Golden Dart this year is largely grown for its late flowers. Golden Dart is a splendid grower, and its rich colour is valuable. Mrs. Canning and Etoile de Lyon do grandly in pot form for late use. These figure largely, also Golden Gem and Princess Teck, with several others.

**Chrysanthemum Modesto.**—Although we have not met with blooms this season so exceptionally fine as a few were last autumn, enough of it is noted to judge of its merits. The colour is so very deep and rich that as a yellow it must become a generally grown variety. It is a free-flowering kind, and every bud produces a bloom of florets of much substance and thickness. It is not from its value as a show bloom, those who

cultivate Chrysanthemums for market should find it among the best for that purpose.—S.

**Chrysanthemum Lady Hanham.**—This was obtained from that well-known variety Vivand Morel. In its true character it has flowers of a charming shade of salmon-rose, but there will be some risk in exhibiting it in the same stand as another sport from the same parent, Charles Davis. The latter is most variable in colour, and, in fact, with all three a great deal depends upon the time the buds are "taken." When in their true character all are distinct and among the best of Chrysanthemums.

## ORCHIDS.

### ONCIDIUM VARICOSUM.

THE large showy lip and the pretty disposition of the blossoms make this one of the finest of all Oncidiums for grouping, the flat shape of the branchlets doing away with all possibility of a formal or stiff arrangement. It is a popular plant by reason of this and the fact that the flowers last long in good order and are useful for cutting. To grow *O. varicosum* well a good deal of care is necessary, the large branching spikes taking away a lot of nutriment from the rather small pseudo-bulbs. These latter are seldom above 4 inches in height, and each bears a pair of deep green leaves. In many cases the pseudo-bulb produces a couple of spikes and many scores of the bright and telling flowers. It is obvious that such a plant will not long be satisfactory if treated as a pure epiphyte; in fact, it needs much more feeding than most in the genus. Equal parts of peat fibre, free of all earth and sand, and clean Sphagnum Moss do well for compost, and it is very important that this is seen to at least once in two years, for if the roots have not plenty of fresh, sweet material to take to, they cannot carry the requisite nutriment to the bulbs. There is no need to repot or rebasket, for until the plants grow out of these the new compost may be given in the form of surface dressings when the plants are beginning to grow. When it becomes necessary to repot, let it be done thoroughly, clearing away every bit of spent compost and dead roots without disturbing any chance ones that may be clinging to pieces of charcoal or crocks in the old compost. Trivial as these bits of roots seem, they help materially to re-establish the plants. Keep the base of the plant an inch or more above the rim of the pot or basket, afford thorough drainage, and make the new material very firm. The best place to grow *O. varicosum* in is a light and airy position in the coolest part of the Cattleya house, suspending it from the roof if convenient in order to ensure the light reaching every part of the plant. The roots must be well watered as long as they and the growth are active, and the best rooted plants, of course, need the most moisture. A difference in the habit of the plants as to flowering will be noted where many are grown; some throw up a spike with the advancing growths, while others flower as soon as the pseudo-bulbs are finished. For this reason no very definite instructions can be given as to watering at this season. One thing is very important, and that is not to allow weak or badly-established plants to further weaken themselves by perfecting and carrying large panicles of flower. Only a day or two since in a local nursery I noticed a batch of plants that were literally flowering themselves to death. On mentioning it to the grower of the plants, he said they were required for a group at the Chrysanthemum show, so the plants were actually being

killed for the sake of the flowers. Of course this can only happen with badly-grown plants, so I may, perhaps, be excused for calling the attention of amateurs to the importance of keeping their specimens healthy by the requisite addition of compost mentioned above and the careful carrying out of all cultural operations. Healthy plants can stand a fair amount of drying in winter, and the rest thus obtained is beneficial to them. During the time they are in flower and until signs of growth are again apparent the plants are quite safe, and, in fact, best, in a house the night temperature of which seldom exceeds 50°. They are not so likely here to be troubled with insects, and especially a soft brownish scale that fastens itself on the under side of the leaves. Sponging with warm soapy water is best for dirty plants, but they may be kept clean by lightly sprinkling them with clear, soft water while growing and keeping up a moist atmosphere. There are one or two varieties of *O. varicosum*, that known as Rogersi being one of the finest and most popular. It is a native of Brazil, and was introduced in 1850. R.

**Cypripedium Leeanum.** This charming hybrid must always remain a popular plant. The best forms are those having *C. insigne* Maulei and similar varieties of the old species as one of the parents, these being larger and finer in every way than those raised from the type. Its other parent is the well-known *C. Spicarianum*.

**Lælia pumila.**—At the present time, in the nurseries of Messrs. W. L. Lewis and Co. at Southgate, there is one of the finest collections of this species that has ever been brought together. There are upwards of 500 flowers fully open. The variation is considerable, many of the flowers equal to those of the variety *Lælia pumila magnifica*, recently given an award of merit, while others are almost white. The good forms of this variety are often confounded with *L. præstans*, but the lip in the latter variety is trumpet-shaped, the side lobes overlapping to a very great extent, and the lines on the disc are scarcely discernible. The colour also differs considerably from that of the typical *L. pumila*.—STELLS.

**Cœlogyne fuliginosa.**—This is not a showy plant, but it comes in at a useful time; the growth, moreover, is fresh-looking and pleasing, being bright shining green on both pseudo-bulbs and foliage. Given a light position in a warm, moist house, the growth is very rapid and the flowers occur about three or four on a scape, though but one is usually open at a time. The sepals and petals are brownish, tinted white, the lip having a dusky brown central ridge margined with red. It likes a fairly liberal quantity of compost, and a little leaf-mould is of assistance. Plenty of water is needed while growth is active. It is a native of Northern India, and was introduced in 1838 by Messrs. Loddiges.

**Arachnanthe (Vanda) Lowi.**—A fine specimen of this lovely species was recently noted in flower in the collection of Mr. J. Gurney Fowler, The Glebelands, South Woodford. It has two spikes, each upwards of 9 feet in length, each having thirty-four expanded flowers. It has the characteristic yellow flowers at the base, one having two and the other three. They are bright orange-yellow, dotted with reddish-purple. The others are chocolate-brown, bordered and streaked with yellow. It requires East India house treatment, and should be placed in well-drained pots or baskets, the potting compost consisting of living Sphagnum, which should be made moderately firm about the roots. It requires a liberal supply of moisture both in the atmosphere and at the roots at all seasons of the year.—H. J. C.

**Cattleya labiata at Camberwell.**—This fine species is one of the principal attractions now wherever Orchids are grown, and many beautiful forms are now blooming in Mr. Measures' fine collection at Cambridge Lodge. Out of a large batch

of plants about eighty were flowering, and surely by now those who have been croaking about this fine Cattleya will have had cause to alter their opinion. It is wonderfully varied, one of the finest of all having unfortunately faded just before my visit. The beautiful albino—R. I. Measures' variety—was in flower, the blossoms large and of good substance, the sepals and petals of the purest white. The lip is marked in a very uncommon way, the ground being pure white, but the throat and front lobe distinctly veined with a deep rosy-lilac in place of the usual blotch. Another pretty form had all the segments of a pretty light heliotrope, with lines of deep rose on the lip. A nice plant of the old variety *pieta* was noticeable on account of the narrow, highly-coloured blotch, while other forms were nearly pure white on the outer segments, the lip having a very large, deep crimson-purple blotch. Many others, all more or less distinct, were noted.—R.

#### ORCHIDS AT HILDENLEY.

In the extensive and exceptionally well-grown collection of Orchids at Hildenley there are several batches of seedling *Cypripediums* of unusual merit. In one lot, a cross between *C. bellatulum* and *niveum*, a few have flowered, and the improvement on the parents is decidedly conspicuous. The flower stems are stouter and much longer, raising the flowers quite 7 inches above the foliage. The flowers have the colours of *niveum* and the size and substance of *bellatulum*. One flower I measured was  $2\frac{3}{4}$  inches across. In fact, if one were not told the parentage, one would say that it was a huge *niveum*. In the cultivation of all Orchids Sir Charles Strickland takes a keen and practical interest, and no doubt the knowledge he possesses of their requirements accounts for the more than usual vigour seen in some of the fastidious varieties in his collection. Most of the *Cypripediums* I noted were growing in a gritty kind of yellow loam, to which about an equal portion of very small pieces of broken pots had been added. So well does this root medium suit the plants that they were vigorous in growth and free-flowering, young seedlings springing up freely around the sides of the pots.

*Dendrobium Phalenopsis Schroderianum* in about 100 plants, and almost as many forms, was also very beautiful. Some were bearing very dark, nearly purple-coloured flowers, and others pure white, with the exception of a few light streaks of vermilion on the lip. This form of *D. P. Schroderianum* was certainly very beautiful and worthy of a name more than that it bears, even although, with such diversity of colouring met with in this grand Dendrobe, and the gratifying of almost every taste, named forms might have a tendency to become too numerous. Among them, too, was a very dark-coloured form of exceptional substance, with unusually large flowers.

*Vanda cerulea* was represented by several large plants bearing flowers of abnormal size, and much paler in colour than those I have seen. One of the specimens Mr. Smith, the gardener, told me had just been secured from Mr. Woodall's noted collection at Scarborough at a rather high figure. All the others had been purchased when imported, and grown by Sir Charles into the fine, healthy specimens of four or five growths, bearing grand spikes of bloom. R. C. H.

*Pleurothallis Barberiana*.—The tiny flowers of this Orchid, so lightly set upon the stems that they hardly appear to be attached to it, are now very attractive to anyone interested in these singular and beautiful little plants. The flowers, in fact, when large spikes are plentifully produced, look like a small swarm of gnats hovering over the plant, and this has led to the popular name of Gnat Orchid being given it. Botanically it closely resembles a *Masdevallia*, and is a dwarf tufted plant, the flower-scapes quite invisible at a short distance and bearing about half a dozen flowers on each. The plant is a native of Colombia; therefore a cool, moist house, such as plants from these

alpine localities delight in, must be allowed. Its blossoms at various times in the year, and should, if possible, be grown in very small wooden baskets suspended from the roof. Nearly fill these with drainage, reserving only about the upper inch for compost, and even with this a few nodules of charcoal mixed with Moss and peat are an advantage. During the summer months plenty of air and moisture is necessary, and the sun must not be allowed to shine fully on the plant until November. It was named after Mr. Barber, of Derby, by Reichenbach, and was introduced in 1880 by Messrs. Hugh Low and Co.

*Cymbidium Mastersi*.—This I have noticed in several collections recently, some plants at Mr. Bull's being especially good. In habit it is a good deal like *C. eburneum*, but the foliage is broader and longer. The bloom spikes grow erect, and have the flowers somewhat closely arranged; they are white, and have the lip spotted with red, and a yellow blotch in the throat. These last a long time in perfect condition and emit a pleasant fragrance all the while. It is a rather difficult plant to bring back to health should it get into bad condition, though only ordinary care is required to keep it healthy when once it is thoroughly established. Badly rooted plants should be shaken almost entirely free of compost and then repotted into a much smaller size than before used. The compost for these may consist principally of Sphagnum Moss and charcoal, so as to induce the formation of plenty of new roots, but for strong and healthy plants a good substantial compost may be used. It does best in an intermediate temperature, many plants having been ruined by placing them in strong heat, which always brings a lot of insects in its train. The atmosphere must be kept moist and plenty of water allowed at the roots all the year round. It comes from Assam, and was introduced in 1841.—R.

*Cypripedium H. Ballantine*.—The hybrid *Cypripediums* in which each owns *C. Fairieanum* as one of its parents, provide us with some of the most interesting and beautiful forms yet obtained. As *C. Fairieanum* has now become almost extinct, and to all appearance baffles all the efforts of the Orchid importers to re-discover, these hybrids must to a very great extent remain rare and valuable. Take for example *C. vexillarium*, the first of the section that was raised by the late John Pominy. It is still one of the most popular, and is likely to be one of the most sought after for many years to come. *C. H. Ballantine* is one of the most distinct and beautiful of the group, and was raised in Messrs. Veitch's nursery at Chelsea from *C. purpuratum* crossed with *C. Fairieanum*. Its dorsal sepal has the characteristics of *C. purpuratum* with broad purple, longitudinal lines extending from the base almost to the top. The petals also partake more of the seed parent's character than any of the other *Fairieanum* crosses. They are broader, straighter, and not nearly so deflexed, purple in colour, lined and spotted with darker purple. The growth is dwarf and has the intermediate characteristics of the two species used in its production. Unfortunately, it is of delicate constitution. I find it does best when grown in the cool intermediate house. A plant in fine condition was recently exhibited at the Drill Hall by Messrs. F. Sander and Co., of St. Albans.—H. C.

#### SHORT NOTES.—ORCHIDS.

*Cattleya marseillensis* (*C. aurea* × *C. Trianae*) is a lovely form, with pale blush-rose sepals and petals, the lip rich crimson-purple, margined with deep rose, the side lobes blush white, shading to yellow, heavily lined with purple at the base. A fine plant, carrying a raceme of three flowers, was recently in flower in the collection of the Rt. Hon. J. Chamberlain, High-bury, Birmingham.—H. J. C.

*Lælio-Cattleya broomfieldensis* (*L. Dayana* × *C. aurea*).—The general characters of the flower are intermediate between those of the two parents. The large lip is rich velvety crimson in front, the side lobes of the same colour, mottled with yellow and

lined with a deeper purple at the base. The growth has the intermediate characters of both parents. It was raised in Mr. N. Cookson's collection at Oakwood.—S. C.

*Cattleya Mrs. Endicott* (*C. maxima* × *Loddigesii*).—This is a lovely hybrid, the sepals and petals similar in shape to those of *Cattleya Loddigesii* the colour also being similar. The lip is deep rosy purple, veined, as in *Cattleya maxima*, with deep purple. It has a broad band of deep purple through the centre. A plant of this lovely hybrid was recently exhibited from the collection of the Right Hon. Chamberlain, Highbury, Birmingham.

*Cypripedium Memoria Moënsi*.—This is a lovely form of the *Leeanum* section. The dorsal sepal is white at the top heavily suffused with deep purple, which is darkest in the centre, the petals pale green heavily suffused with dark brown, the lip green suffused with purple. It is of continental origin, the parentage being doubtful. There can be little question about its having *C. Spicerianum* as one parent. It does best when grown in the warm intermediate department.—S. C.

*Phaius Ashworthianus*.—This is a cross between *P. Manni* and *P. maculatus*. The sepals and petals are yellow suffused with dark brown, the lip yellow lined from the front to the base with brown. The foliage has the intermediate character of both parents, with the characteristic spotting of *maculatus*. It is remarkably free-flowering. It was raised in Messrs. F. Sander and Co.'s nursery at Albans, where it was recently noted in flower.—S. C.

*Lælio-Cattleya Daphne* (*C. Mossiae* × *elegans alba*). In this the sepals are pale bluish petals white, veined on the edges with purple; the front lobe of the lip rich crimson-purple, the side lobes pale rose, with prominent yellow markings in the centre. The growth is intermediate in character between the two species used in its production. It has recently flowered in Messrs. J. Veitch and Sons' nursery, and is a distinct and desirable variety.—H. J. C.

*Cattleya Comfrey* (*C. Lawrenceana* × *Warszewiczii*).—This lovely hybrid has in many degrees the influence of both parents. The petals delicate rose, the lip rich crimson-purple, margined with rose; the upper lobes blush-rose shading white, which latter forms the two discs as in *Warszewiczii*. It has some yellow lined with purple at the base. A two-flowered plant of this hybrid was recently exhibited at the Drill Hall Mr. C. J. Ingram.—H. J. C.

*Cattleya Portia* (*C. Bowringiana* × *C. labiata*). The sepals and petals are deep rose, of fine shape and substance, the lip rich crimson-purple, the side lobes purple, shading to yellow, suffused with brown at the base. This is one of the most beautiful of the *Bowringiana* crosses, and the whole of this set of hybrids improves as the plants get stronger. This one of the most promising hybrids amongst them, was raised in Messrs. Veitch and Sons' nursery, where it was recently noted in flower.—S. C.

*Cypripedium insignae* (Harefield Hall var).—This is a gigantic form, the dorsal sepal 3 inches across, white at the top, the base two-thirds pale greenish yellow, heavily spotted with reddish brown, the lower sepal greenish yellow, thickly spotted with brown at the base; the large petals greenish yellow with a brown suffusion. The lip also is large, yellow, suffused with brown. It is a most remarkable variety, which originated in Mr. E. Ashworth's collection at Wilmslow.—S. C.

*Cattleya Eurydice* (*C. labiata* × *C. Aclandii*).—This is a distinct and desirable variety raised in Messrs. Veitch's nursery, and has the intermediate characters of the parents both in the flower and growth. The sepals and petals are deep rose, spotted with purple at the edges, the spoon-shaped lip deep crimson-purple, shading to deep orange-yellow at the base, the side lobes pale rose, shading to reddish brown at the base. Hybrids from *C. Aclandii* are rarely met with, but it deserves more attention from hybridists.—H. J. C.

*Cymbidium Winnianum*.—This, said to be the result of crossing *C. eburneum* and *C. giganteum*, is a distinct and lovely hybrid raised in the collection of Mr. C. Winn at Birmingham. The sepals and petals are creamy white, the lip similar in colour, with a broad band of yellow down the centre and thickly spotted with reddish-brown spots. A fine plant with two dense spikes of flower was recently noted. The density of the spikes and general characters of the plants suggest that there is some mistake in parentage, but *C. Mastersianum* is very prominent, and might possibly have been one of the parents.—H. J. C.

EXHIBITING ALPINE AND ROCK PLANTS.

SEVENTY years ago we were wont to see really good specimens of many alpiners in the early spring exhibitions both in London and Manchester, plants, moreover, that had been grown at least six months, and others a much longer period, in the pots as exhibited. These were always interesting because shown in a natural way—that is, in so far as their growth in pots permitted. Chief among the exhibitors of these things were Mr. R. Parker, Mr. Ware and the firm of Barr and Sugden. The last, at least once or twice a year, made a special feature of exhibiting in large boxes good representative collections of Sedums, Saxifrages and Empervivums, the plants invariably being in large tufts that would give a good idea of the established masses of such things in any ordinary rock garden. The plants attracted a good deal of notice. Exhibits of this kind, however,

the present time, however, and for the past few years a change has been noticeable in the mode of exhibiting these things, and occasionally those interested in the beautiful alpiners may turn with pleasure to the exhibits of rock plants that Messrs. Backhouse, of York, and the Guildford Hardy Plant Company in particular have made so pronounced a success. These exhibits have now become a portion of the Temple show each year, as also occasionally at the Drill Hall, to say nothing of provincial shows.

What strikes one most of all is the naturalness of these exhibits, and the pleasing manner in which the plants are disposed at once displays a knowledge of the subjects in their native haunts. Instruction of this kind is far better than words, for no amount of description could possibly portray what is contained in the accompanying illustration, which depicts a corner of one of these rockwork exhibits planted with alpiners in flower for the

kin and other Primroses, Sundews in variety, the alpine Anemones with their beautiful cups, vernal Gentians, *Mertensia sibirica*, mountain Columbines, *Lithospermum tinctorium*, alpine Forget-me-not, the American Maiden-hair (*Adiantum pedatum*), and numbers of others grouped in the charming fashion so well depicted in the illustration. By no means the least pleasing feature of these alpine exhibits is the established character of the examples employed, the complete furnishing, and the entire absence of new work. Even the selection of weather-beaten stones is not forgotten, and greatly assists the beauty of arrangements of this kind.

E. JENKINS.

Hampton Hill.

**Water Lilies in small tanks.**—You were good enough to publish one or two notes on these charming flowers in February, 1896, and I would now venture to trouble you again in hopes of stimulating more persons to take up their cultiva-



Corner in exhibit of alpine plants from the Guildford Hardy Plant Company. From a photograph sent by Mr. H. Selze-Leonardi.

...sel from notice after a while, and in their ad a collection of small pot plants, with ny flowers for the most part, or others haps with only a solitary flower, for a e seemed to be the order of the day. This method, as it justly deserved, was short- ed, and no doubt the frequent rebukes of the edening press assisted materially to this end. the present time, in place of the multitude small pots, the chief mode of exhibiting the bit hardy flowers is by bunches in a cut ste. And here also there is a want of thought as well as consistency, particularly in those nces where the large and small, the rare and amon, the good and the indifferent are all ight to the place of meeting simply because ty happen to be in flower on that particular d. In a very large number of instances h a gathering, too often crowded and over- de, receives no attention, even if a pass- h thought. Such collections are ruined by air density as much as their numbers. At

most part. The charming way in which the plants are disposed favours a natural ledge of rock on the mountain-side more than ought else. The beautiful flowering group of Edelweiss in the left-hand corner of the picture and the long-leaved Rockfoil (*Saxifraga longifolia*), so well represented by flowering examples, and the equally picturesque dormant rosettes are all so naturally placed, that they appear to have had possession for years. The same applies to the well-flowered *Ramondia* at the right-hand bottom corner and elsewhere. In some of Messrs. Backhouse's exhibits of this kind positions are made for the accommodation of a large number of plants, from the most elegant of the Bamboos in a small state and Filmy Ferns to the rare and choicest of mountain-side plants or shrubs. The usual date of the Temple show finds many good alpiners in flower, and from time to time I have noticed the hardy *Cypripediums*, a variety of alpine *Pinks*, *Soldanellas*, *Opuntias*, *Saponaria*, *Sik-*

tion and of eliciting the experience of those who do grow them. Finding the varieties I had do so well, I this year made my pond somewhat larger and added one or two new kinds, all of which have flowered. The first of the old ones to blossom was *N. Laydekeri rosea* on May 23, and it continued without intermission for several months; next came one plant of *N. alba*, the common white, then *N. pygmaea alba*, on June 6 *N. pygmaea helvola*, and then the others in a rush. The plants received in April—*N. Marliacea albida*, *N. M. carnea*, and *N. odorata sulphurea* flowered later. I would like to have the experience of others as to the odorata section. *N. odorata rubra* bloomed very well this year, one flower as late as October 2, but it often seems to have its buds deformed. *N. o. exquisita* generally flowers, but sparingly, in August. *N. o. alba* does practically no good. Of *N. o. sulphurea* I cannot say much yet, but it seems a tree grower. Mr. Burbidge tells me he cannot keep this group at all in his pond where *N. Marliacea Chromatella*, *N. M. carnea*, *N. M. albida*, and others grow magnificently. There is a constant current flowing though this pond,

which keeps down the temperature, which often in my pool rises to nearly 5° from sun-heat. I am inclined to think that the odorata section wants more warmth than the others, perhaps more sunshine also; or can it be that they want baking in the mud when at rest? With me they are always covered with water. In fact, the water is so warm, that gold fish breed freely. I had dozens of young ones this year. How many will survive the winter it is hard to say. If the facility with which these charming plants can be grown in quite little gardens were better known I am convinced many now ugly fountain basins would soon be covered with the leaves and blossoms of this charming genus.—GREENWOOD P.M.

## STOVE AND GREENHOUSE.

### BOUVARDIAS FOR CUTTING.

For some years I grew these in the best sorts for market both for cutting and for pot plants, and quite agree with what "R." has advanced at page 380 of THE GARDEN. That these things have fallen into neglect there is no doubt, but I incline to the belief that, from a mistaken view of the requirements of the plants, many have endeavoured to grow them in structures far too warm to be beneficial to the plants. And growing such things in houses that are overheated will quickly bring disease and insect pests. Few things are easier if brought on in the early stages of growth in a warm greenhouse instead of the stove, frequently, as I have seen them, in company with Gardenias and such plants, when as a fact the plants would have been far happier with the Pelargoniums. The soft fresh cuttings of course may be rooted in some warmth and on bottom-heat, but, so far as the after-culture is concerned, the finest bushes are those grown in a much cooler temperature, so long indeed as the plants require any heat whatsoever.

As a rule the private gardener permits his plants to become too leggy before any pinching is done, and if the aim, as is usually the case, is the production of cut flowers, this is a mistake. Take, for instance, a cutting just rooted of any of the perpetual bloomers, e.g., Hogarth or elegans, and having three pairs of leaves. Such a plant will be best potted at once into a 2-inch pot, and a week hence, when the roots have taken to the soil, take out the point. In a short time two shoots usually start from this stopping, and when these again have made two joints each, the points may be again taken out. This may be repeated till a sufficient number of breaks is apparent. Frequently by the time the plants are ready for 5-inch pots, compact bushes, carrying eight to a dozen growths, result, the plants often throwing up radical shoots also as a result of the continued stopping. These basal growths are usually strong and must not be allowed to go unchecked, or the smaller breaks will suffer in consequence. Cuttings rooted in January should make fine plants provided they are grown cool and are potted in good material and quite firmly. A good mixture for pot culture is two parts good fibrous loam, one part leaf soil, and one part peat siftings. To this may be added some sharp grit and about two pecks of finely-sifted manure to each barrowload of the soil, together with a shovelful of bone-meal to the same. This thoroughly mix and allow to become so dry that, without any adhesiveness whatever, it may be rammed quite firmly in the pots. Firm potting or planting, as pointed out by "R.," is most important, and frequently good plants are more or less endangered by the neglect of this simple rule.

Growth may be abundant, it is true, but it will be of a character that does not give the best return in flowers.

### PLANTING OUT.

Much the simplest way to grow these useful plants is to plant them out the first week in May in a frame with a hard ash bottom, into which a depth of from 4 inches to 6 inches of prepared soil has been placed. Make the soil moderately firm and arrange the plants a foot apart each way; afterwards make the soil firm about the plants and over the entire surface. In this the plants may not require any moisture for a few days, when a good watering may be given. As soon as all fear of frost is past the lights may be entirely removed and the plants left very much to themselves. Any further pinching should be completed by the middle or end of June at the latest. Late propagated stock of the previous year may be cut back and similarly treated in frames or a good position in the border. These plants will be best if, instead of being pinched, they are cut over with a knife at the end of June, allowing several strong shoots to grow on to flowering. Great care should be taken to keep the plants free of mealy bug, as once this obtains a footing it is most difficult to eradicate. Planting-out of Bouvardias is not indulged in to the extent it deserves, and particularly where the plants can be placed on a hard bottom they lift with but little loss of root. Even where no frame can be spared, a couple of boards will be found quite equal to the needs of the plants so long as the soil can be kept to the plants. During summer the frequent use of the syringe and occasional doses of soot water, both overhead and at the root, will be found helpful, and greatly conduce to all-round healthy growth. Although I have suggested a special mixture of soil above, such, indeed, is not essential for plants in the open ground. Indeed, the finest lot of plants in the open I have ever seen—and there were some hundreds in all the best kinds—was planted in strong loam on a south border, and though it was considered a much too heavy soil at the time of planting, it was only lightened by a free addition of leaf soil and short manure. The plants were young cut-backs, having been propagated in the previous May and flowered in 4½-inch pots the ensuing winter. When planted in the open border they were rather more than a year old, and, beyond being cut down some time previous, received no other stopping. As a result, the plants began to flower in August and produced a really wonderful supply till the end of the year. Even while still in the open the bloom taken from them was enormous, vastly superior to what one is accustomed to see in these plants; and I feel convinced, if gardeners more generally realised what could be done with Bouvardias in this way, they would take measures to obtain a constant supply for themselves. All the best of the perpetual-flowering kinds are worth growing in this way, as also jasminoides, but the more vigorous growers—viz., *B. corymbiflora* Humboldt and others of the same type—are of little value by comparison. E. J.

**Begonia Gloire de Lorraine.**—In the No. 7 greenhouse at Kew are many plants of this excellent winter-flowering kind. The plants here are quite distinct from the lovely examples recently brought to the Drill Hall, as they are untrained and produce their wealth of charming flowers in a natural trailing manner. Quite small plants when raised on pots are very beautiful in this way, and especially attractive are larger examples similarly grown when used in baskets. In a private garden lately visited some fine plants were raised

above a groundwork of *Adiantum Farleyense* an interspersed with *Asparagus plumosus nanus* and small *Geonoma gracilis*, a charming effect being obtained. All the plants were of light, graceful bearing, and a sort of transparent habit being aimed at, the effect was very telling.

**Vallota purpurea.**—As is usual at this season of the year, this handsome bulbous plant may be often seen flowering in the window of the cottager, who in many instances bestows but little care on it. While admittedly an easily grown plant, it does not follow that anyone can obtain anything approaching a good display of flowers by a system of general indifference and a more or less abundant supply of water at all seasons. By a little timely help and the addition of some good sweet loam, and above all things good drainage and firm potting, this old-fashioned flower may be made one of the most attractive window plants in its day. By potting the bulb every second or third year in August, at the same time sorting them into sizes, the amateur may soon possess a stock of bulbs that could not possibly all flower at the same time. Six large flowering bulbs in an 8-inch pot would make fine display, while the smaller bulbs may be planted six in a 5-inch pot for future use. After a season's growth in this pot a shift may be given and in this way clean flowering bulbs won result, instead of, as now, a crowded colony undersized bulbs in a large pot, and only an occasional one to produce a spike of bloom.

**Grevillea alpina.**—Several of the Grevillea are very pretty flowering greenhouse shrubs, and by no means exacting in their cultural requirements. Some of them bloom during the autumn and winter months, among them being *G. alpina* which forms a roundish bush that flowers freely when not more than a foot high. The oblong leaves, which are each about an inch in length are clothed with greyish pubescence. The flowers which are borne in small clusters at the ends of the shoots, are of a rosy-red colour tipped with yellow. This species is a native of the southern portion of Australia, being principally found in mountainous districts. It has been grown in this country for the last forty years, but, in common with many other plants of this class, it is not rarely seen. Another species still in flower, which stage it has been for some time, is *Thelemanniana*, which is of a loose, graceful habit of growth and has light, elegant foliage, the bright green leaves being divided into several narrow linear segments. The flowers are borne in dense clusters at the ends of the shoots, the weight causing them to droop considerably. The body of the flower is a kind of reddish pin while the prominent style is of a much deeper tint. It is a native of the Swan River territory in Australia, and is frequently met with under the name of *G. Preissi*.—H. P.

**Varieties of Bouvardia.**—On p. 380 under the heading of Bouvardias for cutting there are few varieties mentioned, but two or three are most certainly to be included. The first is the American-raised President Cleveland, which just ten years ago attracted a great deal of attention owing to the fact that it was greatly superior to any of the other bright-coloured kinds, leaving, it did, Hogarth and Dazzler, which then held the field, far behind. It is now largely grown wherever these beautiful flowers are cultivated. A second variety, which originated as a sport from the preceding, is Mrs. R. Green, the flowers of which are of a pleasing shade of salmon-pink. In freedom of growth, flowering, and habit it is the counterpart of the others. These two varieties were shown together on a coloured plate in THE GARDEN, March 30, 1889. The variety Vreeland met with also under other names, is well worth of inclusion in any list. The flowers of this are white, but in an exposed position slightly tinged with pink. Bouvardias are not so much grown in the neighbourhood of London as was at one time the case, for within the area of the sulphur-laden fogs they cannot be depended upon, as a plant at this time of the year will change a beautiful

of flowering plants into miserable objects, though all the leaves burnt as if by fire. The flowers not suffer so much as the foliage.—H. P.

FLOWER GARDEN.

ACHILLEA.

(MILFOIL OR YARROW.)

In this somewhat extensive genus we have many beautiful and useful kinds suited either for the border or the rock garden, while a few also



*Achillea filipendula.*

like *Eupatorium*, *A. macrophylla*, *A. magna* and *A. nobilis*, for example—should be much more freely grown. For this purpose perhaps none is better suited than the species mentioned above, and if not unduly crowded by other plants, and trees in particular, play a conspicuous part in the garden. By far the largest number of species are of quite easy culture, the majority succeeding perfectly well in deep and richly good sandy soils, and the more vigorous kinds in a somewhat heavier soil. Almost all the dwarf tufted species are of easy culture in light loam, made fairly rich, and when planted, they should be, freely in groups in the rock garden, care should be taken that a liberal depth of soil is afforded them. Too frequently



*Achillea macrophylla.*

In our lowland gardens the veriest alpine gems, many of which are of the easiest culture, suffer and perish because planted in the smallest scrap of earth. These plants really die of starvation—a lack of moisture and food generally, a mistake in measure due to their frequently minute growth. At the same time many of these things in their mountain homes send their

roots down in rocky crevices to great depths, and there receive a never-failing supply of nourishment. For these reasons plants under cultivation should, if we would see their best



*Achillea rosea.*

side, at least receive a good depth of suitable soil, according to their kind. The taller kinds better suited to the border are all readily increased by division, some of them to any extent, while the dwarfier kinds in many instances submit to the same treatment and also produce seeds with some freedom. Such kinds as *A. ptarmica* and *A. serrata* with their varieties, by reason of the abundance of stoloniferous shoots, should not be planted in the ordinary border, but in a plot set apart. These may also be naturalised in other parts of the garden. The following species are worthy of attention:—

**ACHILLEA AEGYPTIACA.**—A useful border perennial, growing from 1½ feet to 2½ feet high and producing large terminal corymbs of bright yellow, often 4 inches or 5 inches across. The plant is of excellent habit and valuable for its beautiful and effective silvery foliage. This useful perennial is of easy culture in any good sandy soil, and may be freely increased by division, preferably in the early part of the year. Native of the Levant.

**A. AGERATIFOLIA.**—The species referred to here has been hitherto described under the (I believe) erroneous name *A. ageratoides*, and again in the "Dictionary of Gardening" under *A. Ageratum* (the Sweet Maudlin), an obviously distinct and very old species with heads of yellow flowers from 1½ feet to 2 feet high. The above species, *A. ageratifolia*, for some years known as *Anthemis Aizoon*, produces beautiful rosettes of silvery leaves with crimped margins that lie close upon the soil. The flowers, too, each as large as a shilling when well grown, are pure white with pale yellow disc, and are borne singly on stems some 8 inches high. This lovely Grecian species is a gem for the rock garden, where it should be planted in deep, gritty soil in a sunny spot. Increased by very careful division in early spring,



*Achillea Ptarmica fl. pl.*

by cuttings in August, and by seeds, it is one of the choicest of this large race of composites.

**A. AGERATUM** (Sweet Maudlin).—A distinct species with green entire leaves and corymbs of yellow flowers. As implied in its specific name,

the growth, and the radical leaves in particular, bear some resemblance to *Ageratum*. It is from 1½ feet to 2 feet high, and flowers from August to October. South Europe.

**A. ASPLENIFOLIA.**—A North American species that is not in general cultivation, yet is worthy of more attention on account of its neat foliage and rose-pink blossoms. The latter are rather small, and produced in a compound corymb during the summer.

**A. ARGENTEA.**—A neat-growing and attractive species, sufficiently pleasing and effective on rock-work to merit its being freely grown for its pretty silvery foliage. This is produced in compact



*Achillea Clavenna.*

tufts, the numerous heads of pure white flowers appearing in spring. The plant may be increased by division or by cuttings.

**A. AUREA.**—This is placed here in order and in specific rank, though there is no definite information forthcoming concerning it. In the "Dictionary of Gardening" it is described as having "golden flower-heads, borne singly on stems 18 inches high, and sometimes confused with *A. ageratifolia*." The latter, however, has the ray florets white, not golden, hence little need for confusion arises. No such species, I believe, exists in the herbarium at Kew or in cultivation in the gardens. The plant, freely catalogued and grown in nurseries, is either a variety of, or identical



*Achillea tomentosa.*

with *A. tomentosa*, a species having corymbs of flowers at about 8 inches high or thereabouts.

**A. CLAVENNA.**—This is a very old and well-marked species from the Austrian Alps, and may readily be distinguished by its silvery tufted growth and bi-pinnatifid leaves. It is an excellent species for planting freely on sunny banks or on rockwork, and when in flower the large heads of white blossoms are most effective. This species is about 9 inches high and being of free growth is readily increased.

**A. EUPATORIUM.**—This is one of the boldest members of this family, a fine vigorous perennial that is well known and frequently seen in gardens. The plant grows about 4 feet high, and is specially

suit for grouping. The habit of the plant is good, and the large flat heads of yellow blossoms, often 5 inches across, retain their beauty for a long time. In large gardens this species should be increased and planted in bold masses. In such, if given a fair amount of space, no staking will be needed, and at a short distance the effect will surprise and please. Any quantity may be had by division of the roots in early spring. Caucasus.

**A. HERBA-ROTA.**—Though scarcely so worthy of a position in the border as many species, it is interesting on account of the perfume that follows the touch. It is a true herbaceous perennial, a foot or more high, and bears white flowers in loose corymbs.

**A. MACROPHYLLA**, as may be inferred, belongs to the larger kinds, producing small white flowers in rather large corymbs at 3 feet or 4 feet high. This species together with *A. magna*, with its large yellow heads at 4 feet or more high, would make good companions for *A. Eupatorium*. All are summer flowering and remain good a long time.

**A. MILLEFOLIUM ROSEA.**—In this instance the species is ignored for the sake of its superior variety, *rosea* or *rubra* as it is sometimes called. The plant is so well known that no description is necessary. This fine perennial, however, is worth a place in every garden for the effective mass of colour.

**A. MONGOLICA.**—This species bears masses of pure white elegant blossoms in May and June long before the other kinds are in flower. Very attractive are the blossoms by reason of their purity and most useful in the border or for cutting. The species should be grown in all gardens. It is 2 feet high, of easy growth, and readily increased by division. A native of Siberia.

**A. MOSCHATA.**—A low-growing alpine partaking of the leaf character and growth of *A. umbellata*, and requiring the same treatment. The leaves are woolly and deeply cut, stems sub-shrubby, flower heads white, 4 inches to 6 inches high and flowering from June to August. Europe.

**A. NANA.**—A very dwarf Italian species not often seen in cultivation, yet a very pretty kind for the rock garden. The plant is reputedly difficult to grow and flower in low districts on account of a somewhat weakly constitution. The foliage, deep green and in a clustered rosette, lies closely upon the earth; flower heads white.

**A. NOBILIS**, with Tansy-like leaves, is of robust growth, and better suited to the woodland or shrubbery.

**A. ODORATA.**—A Spanish kind with white flower heads. It is a dwarf species of half a foot high.

**A. PTARMICA FL-PL.** (double Sneezewort).—This useful variety is, perhaps, the best known of the entire genus, and provides a great supply of pure white blossom in terminal corymbs throughout the summer. As it produces stoloniferous shoots freely, the plant should be given a place apart from the ordinary border subjects. For cutting it is very serviceable, and, again, in the shrubbery it would give a mass of bloom for a long period. The plant is 2½ feet high, and grows freely in almost any soil. Several modern forms of this plant are now catalogued, The Pearl, *elegans plena*, and *Snowball* being of the number.

**A. RUPESTRIS.**—This species I regard as among the most important of dwarf kinds, for the reason that its pretty heads of pure white flowers spring from a low prostrate tuft of leaves. In many species the white flower-heads and silvery leaves render the plants less attractive, though the foliage and flowers are in themselves pretty enough. The above species is worthy of care, and should be planted in a warm position in the rock garden in a mixture of gritty loam and leaf soil. It is a native of Southern Italy, growing 4 inches to 6 inches high, and commences to flower in May. The plant may be increased in early spring by careful division and by seeds.

**A. SERRATA PLENA** in many respects resembles *A. Ptarmica plena*, differing from it in the deeply serrated leaves. It is a creeping kind like the double Sneezewort, yet scarcely so free-flowering

or generally useful. The typical species belongs to Switzerland.

**A. TOMENTOSA.**—A well-known species of low tufted growth, and one of the most useful for forming edgings or planting freely in masses in the rock garden. The plant reaches about 9 inches high, producing many flowers in large compound corymbs from amid a dense tuft of greenish and rather woolly bipinnatifid leaves. The rich glow of its large flower-heads renders it a useful plant, and for many positions and purposes its perfect hardiness and freedom are among its best attributes. It flowers in early summer and may be increased to any extent by cuttings or by division. The latter is very simple, as the plant not infrequently roots freely from the under surface of the stems, and by pegging down to the soil may be depended upon to root in a few weeks, particularly early autumn.

**A. TRANSYLVANICA.**—A strong-growing species of about 3 feet high, the deeply-cut foliage covered with a rather dense pubescence. The flower-heads are of a golden yellow hue, and in shape partake of the character of the better-known *A. Eupatorium*. It is a good border plant, of free growth.

**A. TRAUTMANNI.**—A very pretty and useful species from Austria, producing freely its umbels of white flowers at 6 inches or 8 inches high. The tufted growth is composed of rather long, linear and deeply serrated leaves, the latter strongly resembling those of the taller border kind, *A. serrata*, in this respect. In this kind the deep green leaves with white flowers form a welcome change. It is a species that with advantage may be utilised for hybridising, being of free growth, easy culture, and quite hardy.

**A. UMBELLATA.**—A low, almost sub-shrubby alpine with silvery foliage regularly and deeply lobed, the lobes, which are entire, extending to the midrib. In light warm soils the growth of this species is free, and in the rock garden in large patches it is sure to catch the eye. In the Tooting nurseries the growth was so free, that edgings 150 feet long were formed to the beds, and in this position the plants spread out into mounds of silvery white leaves, that were an attraction when the mass of white flowers was past. It is a Grecian species, of easy culture in light soils, and may be increased freely by division in early spring.

**A. VALLESIIACA.**—A pretty Swiss species with white flowers and pinnate leaves, growing about 9 inches high. It is a rare plant in cultivation.

The foregoing are the most important of those in general cultivation. A few others—such as *atrata*, *decolorans*, *Huteri* and *Richardiana*—are worthy of mention. Beyond these, however, an important series, some of which are quite new species and others of hybrid origin from distinct parentage, should prove of great interest in the coming year. All that is known of the hybrid portion is their parentage, and, judging from the remarkable character of their foliage in some instances, some valuable additions to this group may be expected, and their flowering will be eagerly looked forward to.

E. J.

**Helleborus altifolius.**—The earliest blooms of this handsome perennial are now nearing expansion, and those who value these valuable flowers will take care the clumps receive some timely covering. Near London during the past week or two the beauty of almost everything in the open has been marred by the dense fogs that have been so prevalent. With such weather we can only hope to preserve the true beauty of these winter flowers by some temporary covering so soon as the flowers burst away from the crowns, which in the case of the above variety is very early indeed. In the border, however, the effect produced by a few well-grown and established clumps of these things is great, and no plant better repays a special depth of good soil to root into. At least 2 feet deep of this and a position

not too much exposed to the sun should secure good plants in the course of a couple of the years. Mr. Wilson sends us from his garden Wisley some very fine flowers of this as well several bunches of Primroses.

## FLOWERS IN NOVEMBER.

WITH us this extraordinary open weather has given quite a second summer to the flowers, and there are now over sixty different varieties of plants and shrubs in bloom in my garden. I enclose you a list of those I noticed this morning (November 14), thinking it might interest you readers.

## SHRUBS.

Chamaecerasus Morrowi	Fuchsia pumila
Clematis Henryi	coccinea
flammula	Riccartoni
Ceanothus Gloire de Ver-	Genista tinctoria
sailles	Hypericum Moserianum
Diplopappus	Spiraea Anthony Waterer
Also Roses, H.T., T., and H.P.	

## HARDY PLANTS.

Anemone (Japanese) Lady Ardilaun	Henchera sanguinea
Achillea Eupatorium	Helenium striatum
Auricula alpina	Linum flavum
Aster Nova-Angliae and Novi-Belgii	Matthiola (Brompton)
Astragalus major	Oenothera Youngi
Borago officinalis	fruticosa major biennis
Coreopsis grandiflora	Primrose hybrids
Chrysanthemum maximum	Phlox (tall white)
Campanula pyramidalis	Pansies
Backhousei	Potentillas
Centauria cyanus	Polemonium reptans
Doronicum plantagineum	Papaver chinense
excelsum	Rudbeckia nitida
Dielytra eximia	Reseda odorata
Dianthus barbatus	Stenactis speciosa
Erodium	Scolymus hispanicus
Erigeron caucasicus	Scabiosa caucasica
Funkia marginata	Senecio pulcher
Geranium sanguineum	Thalictrum glaucum
Endresi	Tagetes erecta
Geum montanum maximum	Tradescantia virginicaea
coccineum	Tropeolum majus minus
Gaillardia maxima	Viola californica
Helleborus	Veronica prostrata the shrubby forms.
Hieracium aurantiacum	

—F. MITCHELL, *Rush Green, Hertford.*

— I notice some correspondents have sent you a list of plants still in flower. I find the following plants in bloom:—

Alonsoa	Honeysuckle
Ageratum	Jasminum nudiflorum
Agrostemma coronaria	Lobelia (blue)
White Arum in ponds	Love-lies-bleeding
Aponogeton	Mignonette (tree and annual)
Anemone japonica	Mallow (perennial and annual)
Annual Phlox	Nasturtium
Bladder Saxa	Oxalis (purple)
Berberis Darwini	Eurotia and varieties
Chrysanthemums (various)	Paris Daisy (yellow and white)
Tropeolum carariense	Yellow Scotch Daisy
Ceanothus	Pansies
Gloisya	Pernettya
Cotoneaster and varieties	Roses in great variety
Dahlia (various)	Romneya Coulteri
Daphne	Sweet William
Eryugium amethystinum	Spiraea (one variety)
Eschscholtzia (various)	Snapdragon
Escallonia macrantha	Stocks
montevicensis	Salpiglossis
Fuchsia	Schizostylis
Flax (common and red)	Shirley Poppy
Glaucolobus	Stokesia
Gaillardia (various)	Tritoma (two varieties)
Godetia	Valerian
Gaultheria Shallon	Weigela (white)
Hydrangea	
Hypericum	
Heliotrope	

—MEDWAY.

**Flowers in Derbyshire.**—It is very interesting reading in THE GARDEN the flowering of various plants, but most of the notes are from

ourable localities. When we get such results North Derbyshire as we are still enjoying at its date it seems more remarkable. Roses (minas), 400 to 500 plants on their own roots, are full flower and are a mass of buds. China Roses cottages all round are yet full of flower. Tea rose Opbir is one of the best for buds grown out-let. Every plant is still producing good flowers, from cuttings. Marie van Houtte, too, on a west wall is full of fresh buds, that open well gathered and put into water. Rosa rugosa me. Geo. Bruant does grandly here; the beautiful pure white buds are still with us, in massive bushes in sunless aspects. Isaac Periere (climbing) is a massive flower. I find the best cuttings for striking are the flower-stems, after the flowers have done their work in water or on the plant. These Roses are grown in the open orchard, laid out in beds and grass walks. I have noted, amongst the many lists of late flowers in THE GARDEN, no mention is made of Gladioli. I gathered a few good spikes on November 15. They have been plentiful up till now, mostly our own seedlings, all sown in the open ground and planted in rows amongst dwarf Apple trees. Every three or four years they are taken up, tested and replanted in early spring. All varieties seem to be perfectly hardy here. The Bride is marvellously in all sorts of places; it is several inches high already, also General Scott and other early varieties. G. Colvillei has been in leaders here in one place over twenty years. Sweet Peas are still flowering, and some varieties possess later constitutions than others. Venus, the best call for cutting, is good yet. I have four glasses of flowers by me now; it is deeper in tint, with a distinct edging. America is another good late one, though, being flaked, is not a favourite. I have just gathered a good handful of Heliotrope flowers and a bunch of Aloysia citriodora. Carnations (Marguerite) planted and hanging down a wall are full of buds and partially opened flowers. This is a happy way of planting Carnations.—GEO. BOLAS, Hopton Hall, Wirksworth.

## NOVEMBER ON THE RIVIERA.

ALASSIO, a primitive and delightful little place, perhaps the greenest spot on the Western Riviera. The remarkable shelter of its little bay, combined with a good water supply, makes it a paradise for those who love a garden. There are now quite a number of villas in what is prettily called the "Happy Valley," built by Englishmen who care for their gardens, and who show that by energy and skill most wonderful results can be produced in the shelter of Alasio, equal, if not superior, to any other place on this favoured coast. Nowhere else have I seen such trees of the stately *Salvia frutescens*, now laden with heavy branching panicles of bloom which weigh down the long leafy stems till they look as if they must break. Why its beautiful scarlet-calyced blooms are so little known and grown in England is a mystery when once one has seen how superior it is to any neat bush, even of the finest form of *Salvia splendens*, for a big conservatory. There is, of course, "room for both," but while the former needs planting out, the latter is content with a pot. *Tecoma jasminoides* flowering freely, but not merely content with showing a pink eye-flower here and there, is so pretty that even the brilliant *Tecoma capensis* with its scarlet heads, has to yield in beauty to it. A fine *Monia* with large pale pink trumpets and a red throat is new to me, and its name as pronounced by Italian lips is so extraordinary, I dare not put it on paper till I have verified it. Its beauty is undeniable, whatever its name may be. The deep blue and the red *Lochromas* are so splendidly handsome just now, their long summer buds rich in foliage and clusters of pendent bloom.

All these lovely things, however, pale before the brilliant beauty of the rich blue-purple *Ipomoea* *holia*, perennial in growth and greatly superior to the annual Morning Glories so well known in

England; and when one sees as I did, a tree-like bush of *Datura arborea*, laden with its white trumpets, half covered with the brilliant spikes of *Mina lobata* that had clambered up through it and mingled above with the standard *Clive* and *Ipomoea* behind, it is impossible to deny the superior charms of autumn in this climate to the keener air of spring, even though one may miss the charm of the familiar Banksian Roses and rich purple *Bougainvillea*. *Dahlia imperialis* with its tall Lily-like spikes of bloom stands out in stately beauty from a groundwork of *Zinnias*, splendid in colouring and so dwarf in habit that they would be invaluable in England, where they really succeed. All around are Roses in profusion with *Heliotropes*, *Plumbago* and *Geraniums* in such abundance of bloom and beauty that one longs for a sixth sense, not only to enjoy it the more, but to enable others to do so also, and failing that, the next best thing would be to persuade others to come out and see for themselves what the clear skies and hot suns of November can produce on these southern shores not two days' journey from "foggy" Albion. E. H. W.

## OCTOBER IN SOUTH DEVON.

LITTLE rain fell during the past month, the total fall amounting to 0.94 of an inch on eight days, a particularly small record for October, and comparing with 3.99 inches on twenty-one days in the corresponding month of 1896, the October average being 4.35 inches. During the past ten months the rainfall has reached a total of 27.87 inches, or nearly an inch in excess of the average fall for that period, which is 26.98 inches, while it exceeds by almost 10 inches the fall for the corresponding months of 1896, which amounted to 18.61 inches. The mean temperature of the month has been very high, having been over 6° warmer than October, 1896, and 3° warmer than the average mean temperature for the month, the readings being, October, 1896, 47.8°; average for month, 51.1°; October, 1897, 54.2°. The highest sun temperature recorded was 112.2° on the 2nd, and the highest screen reading 62.9°, while the lowest screen temperature was 37.9° on the 7th, and the lowest reading of the grass thermometer 36.8° on the same date. In my notes for September, through a *lapsus calami* or a printer's error, the mis-statement appears that the thermometer on the grass never fell below 31.0°. This should read 37.9°, as during the present autumn the mercury on the grass has on no occasion fallen as low as 36.0°. Although the month has been so warm it has been very sunless, only 97 hours 45 minutes of sunshine having been recorded against 119 hours 40 minutes during the wet October of 1896, and an average for the month of 116 hours 20 minutes. The sunshine records for 1896 and 1897 and the average for the period show a remarkable similarity, the totals for the ten months being 1589 hours 5 minutes in 1896, 1593 hours 20 minutes in 1897, and the average 1595 hours 5 minutes. The total horizontal movement of the wind has been 5592 miles against 7732 miles in October, 1896. The greatest daily speed, 501 miles, was recorded on the 16th, and the highest hourly velocity, 25 miles, between 3 a.m. and 4 a.m. on the same date. The mean amount of ozone in the air has been 36.9 per cent. against 36.1 per cent. in October, 1896, the prevalence of easterly winds accounting for this diminution. In the garden the tall *Acanthus* spires remained effective through a great portion of the month, and *Achillea ptarmica* fl. pl. The Pearl was still in blossom, while *Anemone japonica* *Honorine Jobert* expanded its simple white flowers in continuous succession. On the 20th a belated flower-scape of the hybrid *Alstroemeria* came into bloom, and during the early part of the month the *Belladonna* Lilies showed long lines of pink in sheltered situations. Of the perennial Asters, or *Michauxias* Daisies, a large number have been in bloom, most, however, being past their best before the closing days of the month. With the exception of *Aster grandiflorus*, which handsome subject expands its large,

purple, golden-centred blooms very deliberately, *A. Novi-Belgii* *Archer-Hind* is one of the latest to attain full perfection, the rich purple-blue, profusely-blossomed clumps being at their brightest after the beauty of most of their companions was on the wane. Although the terminal blooms of *Aster grandiflorus* had expanded ere the close of September, the plants are not even yet (November 1) in full bloom. This subject might prove valuable for conservatory decoration if lifted carefully and potted subsequently to bud-formation. The graceful and tall-growing *Aster N.-B.* *Robert Parker* was past its best before the month was many days old, and the darker-flowered varieties *Pluto* and *Flora* waned in beauty as mid-October approached. *Aster Amellus* *bessarabiensis* is one of the most lasting of the Starworts, and though among the first varieties to open its buds, will bloom into November. *Aster N.-B.* *Harpur-Crewe* and *niveus*, having blossomed throughout September, were hardly presentable during the past month, *polyphyllus* being the only large-flowered white that retained its beauty sufficiently to be utilised for indoor decoration. *A. puniceus pulcherrimus* at the commencement of the month had its tall flower-shoots thickly starred with blossoms of the palest lavender-white, and the inconspicuous blooms of *A. diffusus* *horizontalis*, which was in full flower in September, show as yet no loss of freshness. The dark red *Aster Novae-Angliae* *ruber* and the purple *A. N.-A.* *Melpomene* have been in bloom throughout the month, as have the graceful *cordifolius* and *cordifolius elegans*, with their small blossoms set on curving sprays; while the still smaller-flowered *ericoides* has borne a profusion of minute white stars on its Heath-like foliage. The tuberous *Begonias* show as yet no sign of diminishing splendour, the months of September and October having been singularly free from gales and frost, either of which work havoc in the autumnal garden. The new race of *Cannas* bloomed throughout the month with but little-impaired brilliancy, and *Canna Ehmanni* *iridiflora* produced a succession of its drooping, rose-lake flower-clusters. The *Marguerite* *Carnations* still expand their blossoms of varied tint among their grey-green foliage, and *Coreopsis grandiflora* in sumptuous gold is not yet withdrawn from the garden. The earlier *Chrysanthemums* of the *Mme. Desgrange* type have been very effective, having been unmarred by wind and rain, while the later varieties are beginning to show colour in the open, and in nurseries large glasshouses are white with the blossoms of lately-lifted plants of *Lady Selborne* and other semi-early varieties. *Caryopteris mastacanthus* has produced its purple-blue flowers with freedom and survives the winter in favoured localities. The *Duhlias*, untouched by frost—which often prematurely closes their display towards the end of October—have been wonderfully effective throughout the month. Many of the new *Cactus* varieties—to some of which I referred in my August notes—are of distinct value. To the scarlets and crimson then mentioned, *Gloriosa*, *Professor Baldwin*, *Starfish*, *Mayor Haskins* and *Harry Strudwick*, may be added *J. E. Frewen* and *Miss Annie Jones*. To the yellows, *Lady Penzance*, *Blanche Keith* and *John H. Roach*, desirable additions are *Daffodil* and *Eileen Palliser*, while *Night* is, if anything, an improvement on *Matchless*. *Alfred Vasey*, *Fusilier*, and *Mrs. Wilson Noble* are good flowers in varied shades of salmon, and *Island Queen* is of a charming lavender-pink tint. A few light blue spikes of *Delphinium* were to be seen here and there, and some flowers remained open on *Erigeron speciosus*, this plant and the little *Erigeron mucronatus*, or *Mexican Daisy* as it is sometimes called, not having been bloomless since early June. At the commencement of the month *Erythrina Crista-galli* was attractive with its large crimson flower-spikes, and in cottage gardens giant bushes of *Fuchsia Riccartoni* were in bloom. A note of bright blue shows where a dozen autumnal blooms of the *Gentianella* have expanded, while the flowers of *Geum coccineum* brighten the border at infrequent intervals, and *Gaillardias* afford, though in lesser quantity than

of late, their red and gold. In a sheltered corner, backed by a cliff, a large bush of *Habrothamnus* is bearing its clusters of dark crimson flowers. *Helleborus altifolius* expanded the first of its white blossoms on October 23, thirteen days later than last year. A red *Helianthemum* is now in bloom, and the Everlasting Flowers (*Helichrysum*), though treated with indifference when the gardens teem with floral gems, are bright and effective as the days rapidly shorten. *Hypericum Moserianum* is still in flower, and the first-scented blossom has been cut from a clump of *Iris stylosa*. Here and there the *Kniphofias* bear a few brilliant flower-heads, and until the last ten days of the month *Lobelia fulgens* has held its vivid vermilion, while the softer-tinted *L. rosea* has but just shed its last blossoms. Marigolds are still bright, and self-sown plants of *Nicotiana affinis* are now in full flower, their blooms as the days close in opening early in the afternoon. *Oxalis floribunda rosea* flowered well into the month, and on the great bushes of Paris Daisies the yellow and white flowers are still produced in abundance. *Pentstemon*s are not yet over, and *Phgelius capensis* has carried its flowering well into October, while the Winter Cherry (*Physalis Alkekengi*), with every shoot studded with calyces of bright orange, lights up the foot of a long wall with its striking colouring. The blue *Plumbago Larpente* was in evidence during the earlier portion of the month, and now and again the glare of a great Oriental Poppy would for a day or two light up the garden, while the slender flower shoots of *Pyrethrum uliginosum* were crowned with a white coronal of wide-rayed stars, that associated well in arrangement with the darker Starworts. Breadths of orange have been provided by *Rudbeckia Newmani*, whose black-centred flowers have the merit of lasting in beauty through long spells of rainy weather, which, fortunately, we have not experienced during the past month. The deep blue of *Salvia patens* has slowly lessened through October, but *S. fulgens* and *S. coccinea* remain, the former of which is perennial in sheltered spots of South Devon, while the latter has passed the last two winters in the open unharmed. An occasional light blue blossom of *Scabiosa caucasica* has appeared, and the Winter Flag (*Schizostylis coccinea*) has produced its crimson flower-scapes. *Sedum Sieboldi* has bloomed profusely, and *Stokesia cyanea*'s deep purple blooms have opened well in the fine weather. In a secluded corner *Sparmannia africana* has carried a few flower clusters. Of the perennial Sunflowers, *Helianthus latiflorus* and *H. rigidus* Miss Mellish brightened the first half of the month with their golden blooms, and *Tradescantia virginica* perfected an autumnal flowering of triangulated purple blossoms. Many *Yuccas* bloomed well in October, the varieties being generally *Y. gloriosa* and *Y. pendula*, though an occasional spike of *Y. filamentosa* was sometimes to be observed. Some of the former variety are now throwing up bloom-spires that will never reach maturity. The Tea Roses have lasted well through October, the best blooms being produced by wall plants, *Safrano* being especially noteworthy in this respect and furnishing many an exquisite handful of rosy-saffron blossoms. Some of the new China Roses of the *Laurette Messimy* type have also continued their flowering, the blooms, being but semi-double, opening better from the close bud than do the flowers possessing a larger number of petals. The single white *Macartney* Rose has been in bloom throughout the month, and, given the same weather, will open some November blossoms. Violets both in the open ground and in frames have been in fine bloom. The new single, *Princess of Wales*, is at the present time exceedingly fine, bearing, on stems about a foot long, broad-petalled blossoms, many of which when measured are found to exceed  $1\frac{1}{2}$  inches in diameter. Another large single Violet, named *California*, which in size and length of stem is fully up to *Princess of Wales*'s standard, is not as yet at its best. It differs from *Princess of Wales* chiefly in its petals being narrower. The old

clumps of *Doronicum plantagineum* Harpur-Crewe continue to throw up occasional great golden stars. The Ivy-leaved *Pelargoniums* *Souvenir de Charles Turner* and *Mme. Crousse* are still gay, and many annuals are yet to be found in bloom, such as *Coreopsis Drummondii* and *C. sanguinea*, the delicately beautiful white *Cosmos bipinnata*—large plants of which were in full flower at the commencement of the month, and which is admirably adapted for artistic table decoration—*Eschscholtzias*, *Salpiglossis*, *Scabious*, *Phlox Drummondii*, and *Zinnias*, while the dark-coloured *Heliotrope* is still flowering well in some gardens. *Abutilon vexillarium* is still in bloom in South Devon, and *Choisya ternata* is here and there to be seen in full flower. The *Lycyesteria* held its pendent flower-clusters with their purple bracts and white blossoms, though in many cases the blooms had been succeeded by berries. The *Lamrstinus* has begun its season of bloom, and great bushes are crowned with hosts of half-opened flower-heads. The blossoms on the standard *Magnolia* have been almost as abundant as in September, but now that the penultimate month of the year has commenced, the succession of white chalcies can hardly be expected to continue for long. *Tropeolum tuberosum* is now very beautiful, a space of wall some 7 feet high being clothed with its orange and scarlet blossoms, which on long footstalks stand out well beyond the luxuriant leafage, that forms an effective background to the brilliance of the numberless flowers. On *Tropeolum speciosum* the vermilion blooms have been succeeded by blue berries, but *T. canariense* and *T. Lobbianum* are still breadths of gold and crimson. *Solanum jasminoides* is a mass of pendent white flowers, which sway on long lithe sprays from the eaves to the lower windows, and bid fair, should frost not intervene, to last in beauty for another month. Both white and red *Lapagerias* are blooming in South Devon against a north wall, and the blue *Passion Flower* is bearing both orange fruit and blossom, while *Plumbago capensis* may still be seen flowering in the open in a sheltered site. The autumnal tints, though perhaps not so brilliant as in some past Octobers, have formed delightful colour-schemes. In the garden the *Virginian Creepers* (*Ampelopsis hederacea* and *A. Veitchii*), with their crimsons and scarlets, the saffron and orange of the *Plantain Lilies* and *Aralia spinosa*, the purple-red of feathery *Samachs* and the pale yellow of the *Vine* leaves that canopy the pergola and hide the numerous bunches of *Grapes* from which from morn till eve the blackbirds take incessant toll. In the country the light gold of the *Elms*, the glowing orange-brown of the *Beeches*, and the *Oaks* with their intermediate shade of russet. Many of the latter have, however, as yet not even changed colour, and a large portion of the *Elm* leaves have fluttered earthward still green. Although up to the present we have had no frost and the winds have been slumbering, numberless leaves were wavering downwards from the lofty boughs during the last two weeks of the month. Watching their indeterminate descent, wafted now hither, now thither, but ever nearer the ground, one recalled a myth of childhood, to the effect that the capture of twelve falling leaves with the hands ensured, if the captives were threaded on a string and hung up, twelve happy months in the ensuing year. In the hedges the *Bryony* berries shine in crimson skeins, and at the borders of the wood the coral-red fruit of the *Spindle tree* overtops the *Hazels*, while here and there the dark foliage of the *Holly* glows with scarlet. The weather has been wonderfully open during the past month, and as yet there seems no indication of a change. Should the next fortnight prove frostless, we may look forward, according to tradition, to a severe winter later on.

S. W. F.

**Lilium Wallichianum.**—Wallich's Lily has this season flowered with me in a more satisfactory manner than usual, and given greenhouse treatment it seems more amenable to culture than most of the Indian Lilies. Three years ago I had

half a dozen small bulbs sent me from India, of which only two became established, and they have increased in size year by year. This season they each produced a solitary flower, and a few large bulbs imported in the early part of the present year also bloomed. The compost used consisted principally of good yellow loam, lightened by an admixture of peat and sand. They were kept in the same structure and given similar treatment to a *Pelargonium*. In the winter the soil is just kept slightly moist. The long narrow foliage of this Lily reminds one much of *L. philippinense*, while the flower has the same slender tube, but in *L. Wallichianum* the segments of the bloom are quite revolute, and the colour is a kind of creamy white with a greenish tinge on the exterior. The two established plants flowered early in August, while the imported ones did not bloom till a month later. The blossoms possess the pleasant fragrance common to several forms of the longiflorum group. I have never been able to induce *L. Wallichianum* to flourish at all when treated as other than a green house plant, but the late Mr. Niven, of Hull, some years ago in *THE GARDEN* stated that it was quite hardy with him and flowered year after year.—H. P.

## GARDEN FLORA.

## PLATE 1146.

## TWO ROSES.

(WITH A COLOURED PLATE OF KAISERIN AUGUST VICTORIA AND PRINCESSE DE SAGAN.\*)

THE two beautiful Roses illustrated this week are excellent examples of true garden varieties and one can readily conceive what a fine effect might be produced by blending together in large masses such Roses of totally opposite colour and forms. In *Kaiserin Augusta Victoria* we have a variety remarkable for the beauty of its form, its stately habit and delicate cream white colour. Since its introduction in 1891 it has steadily advanced in popular estimation and it now bids fair to become as great favourite as *La France*, *Gloire de Dijon* or *Maréchal Niel*. On the other hand, *Princesse de Sagan*, introduced in 1887, is not so much known as it deserves to be. It is, with the exception of *Cramoisi Supérieur*, the most brilliant Rose we at present possess. If in some respects it closely resembles the *Chinas*, there is that refined character about the blossoms that at once stamps it as a pure Tea. The colour is very brilliant crimson, heavily shaded with velvet maroon, and the form of the flower is very quaint and irregular. This variety is extremely free-flowering and the habit of growth is rather spreading, a fact that enables its more upright growing rival, *Marquise de Salisbury*, to obtain a little more notice; but when the plants of *Princesse de Sagan* are established in well-drained soil, the colour produced by a quantity of this variety massed together is very gorgeous. I can see no objection to planting two varieties of Roses together in one large bed, and the general effect, if the varieties are carefully selected, should be as brilliant as any that can be produced by other denizens of the garden. But supposing an objection be raised to this combination, these Roses could still be planted in groups in juxtaposition to each other, so that the vividness of the one would tend to enhance the delicate beauty of its neighbour. One of two varieties that could be fitly combined, in addition to the two illustrated, would be *Mme. Pernet-Ducher* and *Marquise de Salisbury*. *Augustine Guinoisseau* and *Camoens*, *Princesse*

\* Drawn for *THE GARDEN* by H. G. Moon, Gravetye Manor. Lithographed and printed by J. J. Goffart.





Immie and Souvenir de la Malmaison, Mme. Leste and Francis Dubricul, Enchantress and Amoisie Supérieur, Caroline Testout and Arquisette, General Jacqueminot and La Reine, Mme. Charles and Victor Hugo, Marie Houtte and Gloire des Polyantha, G. Bonnard and Belle Siebrecht, Longworth Amber and Viscountess Folkstone, and Mme. el Chatenay and Perle des Rouges.

PHILOMEL.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**FORCING VEGETABLES.**—However plentiful outdoor vegetables may be during the winter, there is always a demand for a more choice variety, and provided there are suitable convenience and material to work upon, there is no great difficulty in meeting it. Without doubt the most difficult vegetable to obtain in any quantity for the next few months is French Beans, as without plenty of light growth is weak and many of the flowers which form fail to set, especially when there is an absence of sun and foggy weather prevails for days together. The most suitable house must be selected if these have to be produced, such as a well-heat Melon house, where the plants can be kept close up to the roof-glass and a temperature of not less than 70° can be maintained. In other low houses are an advantage, as the temperature is not so likely to vary with a change of weather, especially when cutting winds prevail, while it is an easy matter to use tanned blinds to cover the roof at night during severe weather. This proves a great gain, as the desired temperature is more easily maintained without overheating the pipes, and a more humid atmosphere is secured. The next step to consider is whether to resort to pot culture or to grow the plants in the beds recently cleared of Melons. The latter course might prove an advantage if the bed is sufficiently near the roof to prevent the plants from growing up weakly, as undoubtedly, the roots to be confined and having free run of a rich rooting medium, growth would be stronger and the Beans produced finer, while with careful syringing and keeping the surface of the bed uniformly moist, there is less danger of red spider attacking the foliage—the greatest pest the grower has to contend with, and which it is difficult to prevent when the plants are situated on dry airy shelves. If such a house as described above is available, a gentle hotbed of leaves and straw might be made up, as for Cucumbers. The material should be brought well up to the glass to allow for sinking when the soil is added. By using plenty of leaves the heat produced will be more steady and lasting, while there is less danger of any delicate plants which may be in the house at the time being injured by ammonia, which escapes from a body of stable manure. Having made the material as firm as possible by treading, cover this with a layer of soil at least 9 inches in thickness. The compost used, especially during the dull days of winter, when it is necessary to encourage root action as much as possible, should be light and airy and also of a gritty nature, as roots form in it more quickly and there is less danger of the soil turning sour than when that of a heavier nature is used. Fresh loam containing a certain amount of fibre, spent Mushroom manure, partly decayed leaves, and some sharp road grit will be necessary, using each in proportion so as to form a nice light compost. It may be necessary to range some 9-inch boards round the edge of the bed to form, as it were, a frame to hold the soil. The seed should be sown in rows, and, of course, the more room the plants can be afforded the stronger will be the growth. A foot at least should separate the rows, while the seed should be sown in about 3 inches apart and at about the same depth. The rows, too, if possible should be in the same direction as the rafters, so that

what little sun there is will strike the soil between them. As growth even under these favourable conditions will be naturally weak compared to that made when the days become longer, early supports should be afforded in the shape of a few light twigs placed on either side of the rows. This not only keeps the plants upright, but the flowers are exposed to light, and being dry they have a better chance to set. Where only one house is available another sowing could be made later in small pots, and transplanted immediately the former lot of plants became exhausted, and thus save to some extent the time which much elapse between crops. Pot culture, however, is the method chiefly resorted to in private gardens, as the Beans can be grown on shelves in Pine stoves or Cucumber houses. For mid-winter I prefer pots about 7 inches in diameter, as they take up less room, and better results follow in having these well filled with roots than are obtained by using larger ones only partially filled. The soil in the first instance being full of roots, more moisture and feeding can be employed, and there is less danger of the plants damping off, which often results if soil is used for moulting them up when grown in 9-inch or 10-inch pots. Several varieties are now recommended for winter work, but those of a natural dwarf and free-bearing habit should be selected, such as Osborn's Forcing, Syon House, and Fulmer's Early Forcing.

**CARROTS.**—Only a very gentle heat is required to force these, and the delicate young roots are highly appreciated in the winter. A steady warmth produced from a body of leaves and well-made frame, with a few mats for night covering, are all that is required, and where these are available they could hardly be put to a better use. To maintain a steady bottom-heat from now on till spring from 3 feet to 4 feet of leaves will be necessary, and the bed made sufficiently wide, so that more leaves can be packed round the sides of the frame. If it is thought the leaves will not generate sufficient heat in themselves, a little fresh stable litter mixed with them will promote fermentation. Having prepared a suitable bed and placed the frame in position, about 9 inches of rich sandy soil should be placed in the bottom and the frame closed for a few days, so as to allow the compost to be warmed through before the seed is sown. A plunging stick should be used, and when this is found to strike warm to the hand sow the seed thinly and evenly over the surface, and cover with a slight sprinkling of sand. A light watering through a fine rose will settle the soil and assist germination, especially if afforded at a temperature of 70°. At this season, Parisian or French Forcing Horn should be sown. Ventilation will not be required until the seedlings push through, when it should be given with care, varying it according to outside conditions of the atmosphere. It is a good plan to place a mat or strips of tiffany over the aperture, as this allows moisture to pass off without a rush of cold air entering the frame. From first to last this must be observed, as the least chill checks growth and poor results follow.

**RADISHES.**—These, too, are never more appreciated than when produced during winter on a gentle hotbed, as the flavour is milder and the roots more tempting than those grown in the open during summer. Exactly the same conditions should be followed as recommended above for Carrots, only a less depth of soil is required, but this, if possible, should be brought to within 6 inches of the lights. These really suffer more from the want of light than from any other cause, as without this they draw up weakly and serviceable roots fail to form. Lights with large panes of glass should be used, and no dirt or rubbish should be allowed to accumulate on them. Wood's Frame is a reliable variety for present sowing.

**MUSTARD AND CRESS.**—A good supply of this can easily be kept up with the aid of an ordinary warm greenhouse. A sowing made twice a week in shallow boxes will furnish a nice daily supply. This is looked upon as the most simple thing possible to grow, and for this reason it often lacks

the attention needed to have it in the best condition. A mistake made is that of using the same compost repeatedly, instead of giving fresh, rich soil at each sowing. Strong growth with nice white stems looks more tempting in the salad bowl than the puny article often used.

**MINT AND TARRAGON.**—These useful herbs are often required when least expected; hence it is advisable to lift a number of roots, place them in pots or boxes, and store them in a cold frame in readiness should a spell of severe weather set in. They can then be introduced into moist heat of about 55° as required, keeping them close up to the glass, or growth will be weak and of little value.

RICHARD PARKER.

### FRUIT HOUSES.

**WINTER CUCUMBERS.**—The singularly fine autumn through which we have passed has had a good effect on winter Cucumbers, as hard firing has not at any time been necessary to keep up the requisite temperatures. Red spider and thrips—insects which generally infest Cucumbers to a greater or less extent when the hot-water pipes have to be kept heated to a high degree, perhaps for weeks together—are therefore absent, and with care the plants can be kept clean until after the turn of the year. The syringe, which should have been abandoned for the past few weeks, may then be brought into use again. In the meantime overhead syringing must be discontinued, and the necessary moisture created by damping the floors and sprinkling the surfaces of the beds with tepid water. The vapour troughs too must be kept constantly filled for the same purpose, and where the bottom-heat pipes are contained in a brick chamber underneath the bed in which the plants are growing, it is a good plan to run water amongst them once or twice a day. The moisture so created then rises and penetrates the bottom part of the bed, and prevents the materials composing it becoming too dry. Green fly is apt to prove troublesome at this time of the year, but this can always be subdued by mild fumigations. Mildew sometimes attacks the leaves when the house occupies a low situation, or when the internal atmosphere becomes stagnant through not being changed by the admission of a little fresh air, if not daily, on every favourable opportunity. The best cure for this is flowers of sulphur, and to prevent future attacks keep the air buoyant and sweet by the admission of fresh air, which, if tempered by having to pass over the hot-water pipes on entering the house will be all the more beneficial to the inmates. Pay particular attention to the training and stopping of young growths. Do not allow a quantity of these to develop, and then stop in a wholesale manner, as this means loss of energy, while the plants suffer a decided check from so doing. To guard against this, look the plants over twice a week, when the necessary stopping, tying and removal of decaying foliage or cutting away portions of worn-out bine can be done without the plants suffering any ill-effects. Give every attention to root watering, applying stimulants as often as the condition of the plants demands it. The water should never be given at a lower temperature than 80°. Top-dress with fresh loam, to which add a little charcoal broken small, and bone-meal, which are preferable to animal manure. Maintain a day temperature of 70° to 75°, 65° at night, and a bottom-heat of 80°. Should any of the plants show signs of exhaustion, or appear unlikely to keep up the supply until spring, make preparations for raising a batch of plants at once. For this purpose sow seeds singly in 2½-inch pots and raise them in a brisk heat, keeping the seedlings well up to the light afterwards to ensure sturdy short-jointed plants. In the interval between seed sowing and planting time, well cleanse and prepare a house for their reception.

**STRAWBERRIES.**—Where ripe Strawberries are required very early, preparations for starting should at once be made, selecting a well-proved early variety for the purpose. If the plunging system finds favour, a pit should be filled with

leaves, which should be trodden as firmly as possible. The mild heat generated by tree leaves is preferable to fire-heat, and is well suited to the initial stage of Strawberry forcing, as it stimulates the roots and induces the plants to push up their flower-spikes before much leaf-growth is made. However, all cannot obtain leaves, even if a pit can be spared, and the next best method is to take the plants either into a vinery, Peach, or Fig house just being started. This plan answers well if the plants are placed on shelves close up to the light, and here they may remain until they have flowered and set. In either case the plants will require a little preparation before taking them into the houses or plunging them. They should first be relieved of dead leaves, also Moss and weeds. Examine the drainage and see if all is in working order, and wash the pots. Then dip each plant in a mixture of warm soapy water and sulphur, and top-dress if necessary, using good loam with some proved artificial manure mixed with it. Regarding plunging, much will depend on the size of pit and the quantity of leaves that it will hold. If it should hold a large mass, the plants should only be stood on the surface until all danger of over-heating is past. On the other hand, if the pit should hold no more leaves than will generate a genial warmth, then the pots may be plunged to the rims at once. Keep the plants well up to the light—as this is a most important matter—and introduce more leaves as the plunging proceeds rather than allow them to remain some distance away from it, and run the risk of both flower-spikes and foliage becoming drawn. As a rule plants that are plunged require but little water until growth becomes active; all the same, they had better be looked over every few days. Those standing on shelves in forcing houses, occupying, as they do, more airy positions, dry more quickly, and should therefore be looked over daily. These will also derive a good deal of moisture from syringing, which should be done at the same time that the legitimate occupants of the houses receive attention in this way. All batches of plants intended for late forcing should now either be housed, planted in pits, or plunged in coal-ashes outdoors. Have bracken or litter ready to hand to throw over the plants in the latter case, should severe weather set in.

**EARLY PEACH HOUSE.**—In the calendar for October 23 it was advised that early Peach trees should be started by the middle of the present month if ripe fruits are required next April and May. Assuming that preparations have been made accordingly, close the house at once if this has not already been done. Examine the border, and give it a thorough moistening with water at a temperature of 85°, should the tester give indication that water is needed. Then introduce a good body of fermenting materials, placing it on shutters or boards, or anything that will keep it off the border should the latter be situated, as it should be, inside the house. Failing this, employ just sufficient artificial heat to maintain a night warmth of 40°, with an additional 5° more for the day. In the first case, little or no syringing would be required for the first week or so, as the vapour given off by the fermenting bed will supply ample moisture, but in the latter instance it will be necessary to dew the trees over with tepid water. This may be done twice daily when the weather is bright, but once only when dull, and omit it altogether when fogs prevail. The second syringing must be done early enough to allow the trees to dry before darkness sets in. To keep up a regular succession another house must be got ready for starting, not later than the end of the year, and between now and then get all preliminary operations such as pruning, tying, cleaning, &c., carried out. A. W.

**Jasminum nudiflorum.**—While, as it were, the evidences of a tardy dying summer still appear in the garden, a forcible reminder of the near approach of winter is with us in the flowering of this wall shrub, each twig amply covered with the pleasing yellow flowers. In one instance

in particular an excellent effect resulted from the association of a true climber, *Ampelopsis Veitchi*, where for the past two years the unchecked growth had spread itself beneath the above plant, carpeting, as it were, the walls for some considerable area, and just now the two are beautiful in the extreme, the richly coloured leaves of the *Ampelopsis* more than fully compensating for the characteristic nakedness of the *Jasmine*. Doubtless there are many instances where on walls these two plants could be more or less associated, so that in such seasons as the present a pretty effect may be secured.

## FERNS.

### HARDY BRITISH FERNS FOR GROUPING.

**ALLOSORUS CRISPUS** (the Parsley Fern) is an interesting species, and should always when possible be planted in clumps. Its fronds are usually only 4 inches to 6 inches high, but as they grow in dense tufts the effect is pretty and the contrast with the larger growing kinds striking. It is, as most Fern-lovers know, a mountain Fern, revelling in a damp position, but requiring full exposure to wind and weather. It is desirable to plant this species among stones firmly wedged together, the interstices being filled with compost. This will provide good drainage, for although it likes plenty of moisture about its roots, it must not be stagnant moisture. The fertile fronds grow rather taller than the sterile and are more contracted, owing to the formation of the spore cases. The common name is by many people thought to be misleading, as it causes them to expect the plant to have the appearance of curled Parsley used for garnishing. It has, however, evidently received its name from its resemblance to the wild or sheep Parsley.

**ASPLENIUM ADIANTUM-NIGRUM** (the black Maiden-hair Spleenwort) looks very pretty when a number of plants are together forming a clump. The fronds are dark glossy green, and in a congenial position grow each 8 inches or 9 inches in length.

**A. ALTERNIFOLIUM**, or **GERMANICUM**, and **A. SEPTENTRIONALE**, when grown as single plants, are rather insignificant, but a number of plants together forming a clump become at once distinct and effective in contrast with the larger growers. The same may be said of

**A. TRICHOMANES** and **A. VIRIDE**, the black and the green-stemmed Spleenworts. It is only by planting a number together that a satisfactory effect can be obtained, as they are among the smallest-growing British Ferns.

**THE LADY FERN** (*Athyrium Filix-femina*) is one of the prettiest native Ferns we have. Its fronds are light, graceful, and feathery, often 2½ feet to 3 feet in length. As it is a free-growing species, a few strong crowns planted together will soon form an exceedingly pretty clump. There are two distinct types, one with green and the other with red stems, this feature being perpetuated in the varieties, which are almost of every imaginable form and number several hundreds. Of these some are specially suitable for the purpose under consideration, while others, owing to an unavoidable similarity, may or may not be considered desirable according to individual taste, while a few do not lend themselves at all satisfactorily to grouping. These latter require isolation, and when planted singly in prominent positions, by their particular characteristics and distinct appearance, serve to make more prominent the peculiar beauties of other varieties as well as their own. *Athyrium F. f. corymbiferum* has large spreading fronds, nicely crested at the tips and along the sides. There is a very handsome form of this variety called *purpureum* which has pink stems and rather darker foliage, which should have a place in every fernery. *A. F. f. curtum multifidum* grows rather erect in habit; its fronds are narrower than those of the preceding and nicely

crested; the colour is bright green and its habit gives it a very neat and attractive appearance. *A. F. f. plumosum* of Horsfall and *plumosum* of Jones are exceedingly beautiful; their fronds are large, broad, feathery and graceful. *Plumosum multifidum* is of the same style, but every pinna and the apex of the frond are crested, while *plumosum elegans* is elegant beyond description. The fronds of the last are finely cut into lace-like divisions, the colour is a charming pale green, and altogether it is one of the most lovely hardy Ferns in existence. *A. F. f. todeoides* is another lovely variety, well named from its finely-cut, *Todea*-like fronds. Its foliage is bright green and produced profusely.

The foregoing are all large or medium-sized growers, and as it would be a mistake to have only such in the fernery, the following varieties of the same family should be interspersed to produce contrast and enhanced effect: *A. F. f. congestum cristatum* is a dwarf, compact crested variety, which produces fronds 6 inches to 9 inches in length. *A. F. f. crispum* grows usually about 6 inches high and is a mass of branched and crested fronds and very pretty. *A. F. f. Edwardsi* is a lovely little Fern, growing 6 inches or thereabouts in height; its fronds are pale green densely congested, but not crested, and particularly pleasing in its neat appearance. *A. F. f. Frizelle* is commonly called the Tatting Fern. It has very narrow fronds, usually a foot or so long. The uninitiated would not recognise in this one of the Lady Ferns, as its appearance is so utterly unlike the type. It is a very interesting as well as a pretty variety. Half-a-dozen plants of the should be put together and they will form a very attractive object. The fronds consist of a number of small half-moon-shaped pinnae arranged closely along the main stem, and are usually less than half an inch in width. It is a variety which is rather prone to sport or produce fronds showing a partial reversion to the type. These should always be pinched out, as if allowed to remain the tendency grows stronger, and in course of time the plant will probably lose entirely its true character. The tendency referred to seems to be most common if the soil in which it is planted is too rich; a poor soil would seem to be desirable to prevent the fault. *A. F. f. minimum* is a pigmy form of the type, being in every particular except size, like it. It is neat and pretty, and a few plants put together will soon form a thriving colony. *A. F. f. Vernone cristatum* is a very compact, dwarf variety which grows about 10 inches or 1 foot high, very neat in appearance and remarkably pretty. There is one exceedingly handsome variety (*A. F. f. Victoriae*) which must not be omitted from the list of Lady Ferns, although it is probably one of those which should not be massed. It appears most suited for planting singly in a conspicuous position, where its fronds can develop without hindrance or being crowded by other varieties. They grow from 2 feet to 2½ feet in length; the pinnae are narrow and arranged apparently in twos on each side of the stem, one branching upwards and the other downwards; this causes them to cross and form a kind of lattice-work the whole length of the frond. Many of the pinnae are crested, as is also the tip of the frond. A good plant of this will form a very handsome ornament to the fernery and well deserves the best position therein. There is no other Fern approaching in unique appearance this variety.

**BLECHNUM SPICANT** makes a distinct and pleasing group. In a nicely sheltered position it will retain its foliage through the winter. The barren fronds spread out horizontally, while the fertile, much larger fronds stand erect. The varieties *ramo-cristatum* and *trinervo-coronans*—both crested, the latter, however, much more lightly than the former—are probably the most effective of the varieties when planted some half-dozen together, each kind separate, of course.

**CETERACH OFFICINARUM** (the Scaly Spleenwort) is a very interesting dwarf species, and looks well in a nice-sized clump. It requires rather a dry position, open to the sun and wind.

*CYSTOPTERIS FRAGILIS* (the Brittle Bladder Fern) and *C. montana* (the Mountain Bladder Fern) are two charming species. They must be in the shade, and, surrounded by larger-growing kinds, they will certainly prove worthy of their position. One of the prettiest species for grouping is

*LASTREA ÆMULA* (the Hay-scented Fern). The pleasing green fronds, with their crisp appearance and dense habit of growth, cause it to be universally admired. Coupled with this is its peculiar perfume, reminding one of new-mown hay, more noticeable in autumn when the season's growth has been made. This combination of appearance and perfume causes it to be a general favourite for the hardy fernery.

*LASTREA DILATATA* is somewhat like *æmula* in form of foliage, but grows much larger and is darker in colour. This is a capital species for effect. There is one variety of this (*grandiceps*) which is very heavily crested and more compact in habit, which may be planted with advantage.

*L. FILIX-MAS* (the Male Fern) is well known as an effective, showy species. This grows to a large size and makes a bold and substantial background for the finer kinds. Another form of this fine Fern, now distinguished by the name *L. pseudo-mas*, is very handsome. The fronds are bright yellowish green, the stems are densely clothed with golden-brown scales, the texture is thick and leathery, causing it to be an evergreen in sheltered places. The fronds are produced almost in the form of a shuttlecock, very symmetrical in their arrangement and of large size. This is certainly one of the most noble-looking British ferns. There are a number of very effective varieties of both these forms of Male Fern; among them are *L. F.-m. Barnesi*, a large, bold form; *L. F.-m. Bollandæ*, equally large, but more foliose and the most feathery or plumose of this section; *L. F.-m. fluctuosa*, otherwise named *crispatissima*, dense in habit and remarkably crisp in appearance; *L. F.-m. grandiceps*, a splendid, heavily crested variety, which makes a grand show; *L. F.-m. cristata*, crested all along the sides and at the tip; and *L. F.-m. polydaetyla*, also a fine crested variety, broader in the frond than the preceding. These are all admirably suited for planting in groups and produce a fine effect.

*L. MONTANA* (the Mountain Buckler Fern), also known as *L. Oreopteris*, and commonly called the Lemon-scented Fern, is pretty; its fronds are pale green and grow 2 feet to 3 feet in length, according to position. It likes a moist position and plenty of light and air.

*L. RIGIDA* is of smaller growth, rather stiff, but distinct.

*L. THELYPTERIS* (the Marsh Fern) requires a damp position and produces a forest of light green, erect fronds. Nearly everyone knows the Royal Fern,

*OSMUNDA REGALIS*. This is a grand Fern, and in marshy ground or planted by the waterside, where its roots may obtain an unstinted supply of moisture, it will make a more massive specimen than any other hardy Fern. In the early part of the season the fertile fronds are very remarkable in appearance, the spikes of spore cases standing prominently at the ends of the fronds. This gives rise to the misnomer, "the flowering fern." The variety *cristata* is a very handsome crested form, much lighter green in colour and heavily crested. The cresting in this Fern does not spoil it, as it does in some cases. This variety is a dwarfer and more compact in habit than *regalis*, but, notwithstanding this, when planted in a favourable position it makes a beautiful specimen.

*POLYPODIUM DRYOPTERIS* (the Oak Fern).—In native habitats this species carpets square yards of ground with its pale green triangular fronds. It appears to be everyone's favourite, and is well deserving of its universal admiration. It is extremely hardy, and when planted in nice light compost in a shady, sheltered position it thickly spreads and produces a mass of lovely foliage.

*POLYPODIUM PNECPTERIS* (the Beech Fern) is another pretty species equally quick in growth and as dwarf in habit; its foliage is darker and more woolly-looking than that of the Oak Fern, and forms a nice contrast to it.

*POLYPODIUM VULGARE* (the common Polypody) is totally different from the two Polypodies just referred to, and while they invariably clothe the ground, often growing in rocky or stony places, this one very frequently clothes the branches of trees and forms masses of foliage on the roofs of old buildings and on walls. These facts suggest that this species may be planted with success where most other kinds would not live, and pretty clumps may be established on projecting rocks, where, provided it obtains a reasonable amount of moisture at its roots, it will soon be at home. When, however, it is planted in less exposed and more shady positions, its growth is more luxuriant and its fronds larger. It may here be mentioned that the Polypodies are all very partial to good leaf-mould, and should be supplied freely therewith. The variety *cambricum* is a very beautiful variety of this species; its fronds are much more massive and deeply cut into large overlapping divisions; *P. v. cristatum* has fronds like the species, but crested; *P. v. grandiceps* is very heavily crested and a handsome variety; *P. v. pulcherrimum* is large and exceptionally handsome; *P. v. semilacerum* is not so heavy in foliage, but nearly as pretty; while *P. v. trichomanoides*, which is a selected form of *P. v. cornubiense* Fowleri, is cut up into countless segments and is very beautiful. All these should be planted a few of each together, and they will prove very pleasing.

*POLYSTICHUM ACULEATUM* (the hard Prickly Shield Fern) and *P. ANGULARE* (the soft Prickly Shield Fern) grow to a large size. The former has dark, glossy green foliage, and the latter softer, paler green fronds; both are evergreen and very handsome. There are some exceedingly beautiful varieties of these species which make fine effective masses when planted in clumps. Among them are *P. aculeatum pulcherrimum*, than which it would be difficult to find a more handsome Fern; *P. angulare divisilobum* (several forms) with fine large drooping fronds, and, notwithstanding its rather alarming name, *P. a. divisilobum plumosum*, an exceedingly beautiful variety with massive fronds cut into countless overlapping pinnae; *P. a. polydaetylum splendens*, a very handsome variety, well named; *P. a. plumosum*, with very large plumose fronds and one of the noblest-looking British Ferns.

*POLYSTICHUM LONCHITIS* (the Holly Fern) is dwarf and compact in habit and very pretty, each pinna being like a miniature Holly leaf.

*PTERIS AQUILINA* (the Bracken) may be considered by some people too common for cultivation; nevertheless it is a desirable kind to plant where there is plenty of room. *P. a. cristata* and *P. a. grandiceps* are fine varieties to which the objection of being common cannot be applied; these, with their tree-like habit of growth and more or less heavily tasselled fronds are very desirable.

*SCOLOPENDRIUM VULGARE* (the Hart's-tongue) should be planted, if only to compare with its numerous progeny, beautiful and otherwise, to which it has given birth; but it is also well worthy a place for its own sake. Its bright green undivided fronds are quite distinct from those of all the other British species, and when well grown are really pretty and produce a telling effect. The wonderful and unlimited resources of Nature are not more evident anywhere than in the large number of varieties of every imaginable form which have been developed from this simplest of all species. Mr. Lowe in his "British Ferns" enumerates some 450 or more varieties of it. A very large number of these are scarcely recognisable as different from others, but at the same time there are many very remarkable, and some exceedingly pretty ones among them. It must suffice here, however, to specify just a few of those most desirable for the particular mode of planting now under consideration. Unquestion-

ably the most handsome section of the various divisions of this large family is that made up of the crispum forms. These are of many forms, found wild in most cases, and in others raised from spores in cultivation. Some are narrow, others broad; some erect, others drooping; some slightly crimped or frilled, others very densely frilled, others fimbriated, and some more or less heavily crested as well as frilled. The most striking and beautiful are *crispum* of Grey, *crispum* of Wills, *crispum* of Moses, *crispum* of Bowden, *crispum* of Cowburn, *crispum majus* and *crispum robustum* of Jones, *crispum fimbriatum* of Stansfield, and *crispum fimbriatum* of Cropper. *Crispum* of Stabler is also a nice variety. There are several crested forms, but the cresting in their case rather detracts from than adds to their appearance. Among the crested forms which are not crested the best are *capitatum*, heavily crested; *cristatum*, neatly crested; *digitatum*, bearing a flat, broad crest; *grandiceps* and *ramo-cristatum*, both branched and crested; *cristulatum*, a very pretty form of *ramo-cristatum* style; *Kelwayi*, densely branched and crested; *Kelwayi densum*, exceedingly dense and compact, so much branched and crested as to be like a ball of Moss 3 inches or 4 inches in diameter. Unfortunately, this variety is very liable to damp off unless some means are adopted to keep the wet off the foliage during winter. Another very pretty variety is *ramo-marginatum*, which combines the characters of *marginatum* and *ramo-cristatum*. Of different character are *laceratum*, with broad fronds deeply cut, lacerated, and sometimes crested, and *sagittatum grande*, with very broad, projecting lobes at the base of the frond.

The wonderful variety of foliage represented by the various Ferns in the foregoing category planted and arranged judiciously would make up a fernery possessing a beauty and interest that it would be impossible to surpass by means of any other plants. There are, of course, many others suitable for the special purpose for which these are recommended, and a very large number of other very beautiful and equally interesting kinds, which, however, are not so suitable for planting in groups as these here enumerated. These may form the subject of other notes in course of time. B.

## TREES AND SHRUBS.

### TREES AND SHRUBS IN AUTUMN.

THE brilliant autumn scenery of the North American woods is proverbial, and many of the species so remarkable there are among the brightest of our trees on this side of the Atlantic, where, however, the leaf-colouring is, as a rule, less pronounced than on the western continent. The dull, damp weather which frequently prevails at this season of the year leads in many instances to a far more sombre display than that experienced when the weather is bright and clear. Position, too, and individual peculiarities both play a part in the variations of colouring that are to be found among trees and shrubs in the autumn, while some subjects possess a quiet beauty of their own in ever varying shades of yellow, brown, and russet, which render them equally worthy of admiration with their more brilliantly-tinted brethren. When a number of trees and shrubs of one species are grouped together, and all, as far as can be seen, under similar conditions, their individual features are then brought more prominently forward, some changing colour a week or two before the others. That this is not an accidental circumstance is shown by a fact I have several times noted, that the same trees show this peculiarity year after year. Among trees and shrubs remarkable for brilliant autumn effects may be mentioned many of

the Oaks, particularly the several forms of the Red Oak (*Quercus rubra*), *Q. coccinea*, and *Q. tinctoria*. In brightness of colouring they leave our own European Oaks far behind. The different Sumachs (*Rhus*) are, irrespective of their native country, all remarkable for their autumn tints. The sturdy-growing species with long pinnate leaves, such as the Stag's-horn Sumach (*R. typhina*) from North America, with *Rhus Osbecki* and *R. succedanea* from China and Japan, vie with the simple-leaved bush forms, the Venetian Sumach (*R. Cotinus*) and the United States *R. codonoides*, in their vivid hues, while the brightest among them are equalled by the curious climbing Poison Oak (*Rhus toxicodendron*), which is such a conspicuous feature in some parts of the American woods, where it clothes the stems of lofty trees. This has acquired such a bad name as a virulent poison, that it is not grown so much as it would otherwise be. It is frequently met with under the names of *Ampelopsis Hoggi* and *Ampelopsis japonica* (for it also occurs in Japan), and as such it is more often planted. The mention of *Ampelopsis* reminds one of the brilliancy of the Virginian Creepers. Nearly the whole of the Vines are remarkable for their autumn tints, particularly the Claret Vine (*Vitis vinifera purpurea*), whose leaves about the end of the summer acquire a deep purple hue, which is retained till they drop. The large-leaved *Vitis Coignetiae* has attracted a deal of attention within the last few years owing to its beauty in autumn, and some of the others are little if anything behind it in this respect. The autumn tinting of *Vitis inconstans* differs greatly, there being certainly two or three forms of it in cultivation. That with neat growth fixed closely to the wall is much brighter than in the larger-leaved form, whose foliage frequently dies off a dull brown.

The Maples, which largely contribute to the beauty of the North American forests, have in most cases a considerable amount of yellow in their decaying leaves, though in many instances it is flushed more or less with red. In most of the European species a brownish hue predominates. The Cockspur Thorn (*Crataegus Crus-galli*) has long been noted for its autumn display of both fruits and decaying foliage, and several other species are very ornamental in this respect. *Crataegus pinnatifida* is remarkable from the fact that the leaves die off a clear yellow, in which it differs from most of its associates. Other rosaceous trees or shrubs that may be especially mentioned for their autumn tints are the Bird Cherry (*Prunus Padus*), some of the Pyruses and particularly the little *Pyrus arbutifolia*, *Cotoneaster horizontalis*, the Amelanchiers, and several of the Plums and Cherries.

The Burning Bush is the American name for *Euonymus atro-purpureus*, and it well expresses the bright autumn tints of its foliage. It is by no means the only member of the genus remarkable in this respect, as our own native Spindle Tree (*E. europæus*), together with the South European *E. latifolius*, are both particularly conspicuous, and so is *E. Thunbergianus*, a little-known species from Japan. The American Hickory nuts and the Yellow Wood (*Cladrastus* or *Virgilia lutea*), a native of the same continent, are all remarkable for the clear, self-yellow of the decaying leaves, while the Tupelo Tree (*Nyssa sylvatica*) is of a clear scarlet tint, but the foliage soon drops. The Sweet Gum (*Liquidambar styraciflua*) whose leaves are usually of a deep purplish-red lit up more or less with orange, is one of the brightest coloured of all our trees at this season, and throughout the year it is very ornamental.

The Dogwoods (*Cornus*) are all bright and pretty in the autumn, while after the leaves have dropped the shining red bark of some of them is very ornamental. Ericaceous plants include among their number a great many worthy of note, including several of the *Vacciniums* and their allies, the hardy Azaleas of all sections, and, in particular, the North American *Oxydendron arboreum*, known also as *Andromeda* and *Lyonia arborea*, whose leaves acquire a brilliant shining red tint, in which stage they remain some weeks before they drop. This needs a cool peaty soil to do it well. The purple-leaved forms of the Japanese Maples all intensify their colouring some time before they shed their foliage, hence during the last month or so they are particularly rich. Though in many cases they are less

(red). While other subjects equally bright and effective may have been passed over, there is in addition, quite a host of trees and shrub whose decaying leaves are, though less brilliant very beautiful. Such as these are not only valuable for the quiet beauty that they themselves possess, but from this circumstance, they serve as a foil to those with more vivid tints.

T.

### DAISY TREES.

(OLEARIAS.)

Most of the kinds of *Olearia* in cultivation are natives of New Zealand. But amongst the Australian species there are many beautiful shrubs which would pay for their introduction. The species already in cultivation are real



*Olearia (Eurybia) Gunniana.*

bright than the North American trees and shrubs, yet our British kinds all acquire an additional beauty in autumn. Thus the Elm usually changes to one of the many shades of yellow, and often branch by branch instead of all at once, as most of the others do; while the Oak, Ash, Lime, Beech and Birch each possess their own particular features, with individual variations. The Guelder Rose serves to brighten up many a copse and hedgerow, being, in some seasons at least, particularly brilliant. A few other plants worthy of note are the common Barberry, and *Berberis Thunbergi* (red), *Liriodendron tulipifera* (yellow), *Ptelea trifoliata* (clear yellow), *Gymnocladus canadensis* (yellow), and *Spirea prunifolia flore-pleno*

useful and handsome shrubs, easily cultivated evergreen, very free-flowering, and of good habit. The only drawback is their not proving hardy, except in warm localities. Still, they are a great many gardens where they will grow and thrive perfectly, and there is also the chance that in time most of the kinds will be acclimatised sufficiently to bear an ordinary English winter. Besides, some of them, as, for instance, *O. insignis*, are good greenhouse plants.

*OLEARIA INSIGNIS* is the most remarkable species yet introduced. The flowers are on erect peduncles, as thick as a goose-quill, and from 6 inches to 9 inches long. The yellow flower heads are a little over 2 inches across, and remain

h on the plant for about six weeks. This is one of the most interesting and prettiest of the composites which are found in Australia, New Zealand. It is a native of Middle Island, in New Zealand, where it is said to grow on the driest rocks.

**DENTATA** is cultivated in the Scilly Isles and other favourable localities, where it forms a large bush. The flowers are each over 1 inch across and numerous, in terminal racemes; the ray florets number about twenty, each half an inch long, curved upwards, and forming a saucer-like head; they are white, tinted with rose, the disc being bright yellow. This is a most beautiful flowering shrub, and would probably thrive in the south of England in sheltered situations.

**GUNNIANA** (see cut) is quite hardy in the south of England. Against a sunny wall it ought to do in almost any part of England. It forms a bush, with small, toothed, green leaves, the upper surface and other parts of the plant covered with white felt-like tomentum. The flowers (as shown in the illustration), and which appear with those of the Hawthorn, are very abundant, clothing the branches with a mass of white Daisy-like blooms, which are borne singly at the ends of hundreds of tiny branches on the upper part of the large branches, and they are 1 inch across, with about a dozen ray florets, which are half an inch long and white, the disc being yellow. This species is also a good greenhouse plant. It is a native of Tasmania.

**HAASTI**.—Whether grown as a pot plant or against a wall or in the open border, or even as a specimen on lawns, this shrub almost invariably gives satisfaction. It is hardy in most parts of England, growing to a large size in the more favoured localities. It has been recommended as a suitable plant for sea-side gardens by several who have tried and proved it. If planted in large clumps it has a good effect when covered with its thousands of Aster-like flowers, and even out of bloom it is attractive. In New Zealand, where it is found at altitudes of about 4000 feet, it grows in a small shrubby tree. Here, however, it forms a compact bush, not unlike a Box plant. The leaves are oval, leathery, shining green above, white beneath, where they are covered with felt-like hairs, as also are the stems. The flowers are very numerous, in terminal corymbs, the ray florets each a quarter of an inch long, white, the disc yellow. The plants usually bloom in August and remain in perfection several weeks.

**MACRODONTA**.—This was introduced from New Zealand. It is the *O. dentata* of the New Zealand flora, there being another *dentata*, the true one, native of Australia, and described above. The plant has large, silver-green, Holly-like foliage and dense heads of whitish flowers. When first grown it attains a height of 20 feet, the stem 2½ feet in diameter at the base, the branches stout, and forming with the leaves a round, somewhat flattened top, which is hidden by the dense heads of white flowers developed in the month of August. The foliage smells agreeably of Musk.

**RAMULOSA** is a handsome little shrub which has been in cultivation about twenty years under the name of *Eurybia ramulosa*. The flowers are very numerous on long, curving branches, forming elegant sprays of pretty, stary blossoms; each one is small, but they are so abundant and prettily arranged that the effect of a well-grown plant when in flower in September or October is charming. The species is a native of Tasmania, New South Wales, &c.

**STELLULATA** was one of the first species introduced into England. It grows to a height of about 5 feet; the leaves vary in length from half an inch to 2 inches, the upper surface green, the rest of the plant covered with a rusty tomentum; the flowers in leafy panicles, which are long and very graceful in form; each flower is small, Daisy-like, pure white, with about a dozen ray florets. When grown against a wall this species blooms very freely in June and July. It is a native of Tasmania and New South Wales. There are several varieties of it described by botanists.

*O. ilicifolia*, *O. myrsinoides*, *O. corymbosa* and *O. gummosa* are less important than those described above.

**Strawberry tree** (*Arbutus Unedo*).—This is one of the most striking shrubs in flower. It grows to a height of about 20 feet, and forms a well-balanced ornamental tree. Its white bell-shaped flowers are borne in panicles, and when properly expanded have a charming effect against the deep green foliage, and large red Strawberry-like fruits, which are borne very freely. It delights in a sandy, well-drained soil, and though perfectly hardy, prefers a sheltered spot. *A. Unedo* is suitable for planting on the outskirts of the lawn.

**Chimonanthus fragrans**.—The first flowers of the Winter Sweet were picked on November 6 close to the wall with the tree still in full leaf and showing only a faint tinge of yellow, the mild autumn being responsible for the early expansion of the one and the long retention of the other. This picking was from the variety usually found in gardens. It is a trifle earlier than *grandiflorus*, but in size of bloom and in fragrance not up to the standard of the latter. Where the blooms are prized for shallow bowls or vases it is desirable to make provision for obtaining them as far as possible all through the winter, and if the trees are on a wall, this may be effected by the aid of a piece of tiffany fastened to stout laths, the latter being temporarily secured both to the top of the wall and in the ground. This affords sufficient protection from snowstorms and from any ordinary frost, and can easily be removed during spells of mild weather.—E. BURRELL.

**The Sassafras**.—This has been this autumn unusually beautiful. But it is not in autumn alone that the Sassafras is attractive and interesting; in winter its bright green, lustrous branches make a cheerful note on the margin of the forest; in spring it is charming, with its drooping clusters of delicate yellow flowers surrounded by the enlarged and showy scales of the expanding buds; all summer long its variously shaped fragrant leaves retain their healthy luxuriance; and the fruit, which birds rarely allow to remain long on the branches, is showy, with deep blue berries and much thickened and scarlet caps. Few people plant the Sassafras, perhaps because it is a native tree, and nurserymen rarely offer it for sale. Large plants are difficult to transplant, as the thick, fleshy roots are scantily provided with rootlets, but small plants, which can often be found in abundance along fence-rows and wood borders, are easily managed, and grow rapidly when set in good soil.

**The Swamp Magnolia** (*M. glauca*).—In the notes from America (p. 377) *Magnolia glauca* is said to vary from a deciduous shrub at its most northern limit to an evergreen tree in the extreme south. Though this may be so, there are certainly two forms of the Magnolia in question in this country, one being quite deciduous, and the other, unless the weather is very severe, sub-evergreen in character. This latter is the more desirable, as it continues to flower much later than the other. The Swamp Magnolia is well adapted for a single plant on a small lawn that is not a parched up spot, as it is naturally of medium growth, and flowers from midsummer till autumn. The cream-coloured blossoms are only about 3 inches across, and are not particularly showy, but sweetly scented. As the plant blooms freely when 6 feet high or less, the fragrance of the blossoms can be more readily appreciated than if it attained tree-like dimensions before flowering. At no time are many blossoms expanded on the one plant, but a succession is maintained for the above-named period.—T.

**The Japanese Prunus Pseudo-cerasus**.—Of the trees recently introduced into American gardens one of the most promising is this, which has for several years proved hardy in the Arnold Arboretum, where it is growing rapidly. Forms of this tree or of some allied species with double flowers are now common garden plants in the United

States and Europe, but these are less hardy and of much slower growth than the wild type which appears to be rare in American collections. It is the largest tree of the family in Japan, and, next to the Apricot, more cultivated for its flowers by the Japanese than any other tree. In the forests of Yezo, where it is very common and sometimes 80 feet high with a trunk three feet in diameter, it resembles in the appearance of the bark and in habit the wild type of *Prunus Cerasus*, the Cherry tree of our gardens, and it might be mistaken for that species. In autumn it is particularly beautiful, as the leaves turn deep scarlet and light up the forest before the Maples assume their brightest colours. For centuries this Cherry has been used in Japanese gardens and temple grounds, and near Tokio there is a Cherry avenue more than a mile in length along the banks of the Sumi-da-gawa, and at Koganei ten thousand of these trees were planted a century and a half ago in an avenue several miles long.—*Garden and Forest*.

CUPRESSUS.

This genus is widely scattered over the Atlantic and Pacific coast regions of the United States, Mexico, and Lower California, and in the Old World is distributed from South-eastern Europe and the Levant, along the Himalayas to China.

**CUPRESSUS THYODES** is the White Cedar of the Eastern States, where it grows in cold swamps on the Atlantic and Gulf coast plain, usually immersed during several months of the year, from Southern Maine to Northern Florida and the valley of Pearl River, Mississippi, covering them at the north with pure forests of wide extent, and at the south mingling with the Bald Cypress and other moisture-loving species. It is a slender, pyramidal, fragrant tree often 70 feet or 80 feet high, with a stem rarely more than 2 feet in diameter, thin, spreading branches clothed with open, flat, fan-shaped spray and dark, dull blue-green foliage, becoming rusty brown at the north in winter when exposed to the sun. The White Cedar, which is rarely cultivated in our gardens, for the reason, perhaps, that it is a common native tree, is of course perfectly hardy, and in drained or in undrained soil grows rapidly into a slender, shapely, graceful, open pyramid. European nurserymen propagate several forms of this tree with glaucous and with yellow-marked foliage, and others with fastigate and pendulous branches.

**C. NOOTKAENSIS** (the Sitka or Yellow Cedar) is a common inhabitant of South-eastern Alaska, where it is scattered through the forests of Spruces and Hemlocks which cover the coast mountains, and ranges southward through Western British Columbia and Washington to the valley of the Santiam River, in Oregon. It is the most valuable timber tree of Alaska, where it sometimes grows to the height of 120 feet, with a trunk 6 feet in diameter. Its light, close-grained, pale yellow wood has no superior in our forests as material for the cabinet-maker, and in its lasting quality when put into the ground. The slender branches of the Yellow Cedar, sweeping outward and upward in long curves and furnished with long, gracefully drooping frond-like bright yellow-green branchlets, make this tree lovely in its native forests; but to develop all its beauties it requires the humid climate of the north-west coast, and in drier regions displays little of the grace and vigour which make it one of the handsomest of our conifers. In gardens, both in the United States and Europe, the Yellow Cedar is usually known as *Thujaopsis borealis*, and is still generally seen only in juvenile form with dense pyramidal habit and blue-green foliage. It appears to be quite hardy from New York southward, but east of Cape Cod, although it can often be kept alive for some time, it usually succumbs at the end of a few years to the hardships of its surroundings, and is never really satisfactory in this part of the country. The largest of all the Cypress tribe and one of the great timber trees of the world,

C. LAWSONIANA, is now a familiar ornament in the parks and gardens of all temperate countries, although it is less than fifty years since its discovery. Its great size—for specimens 200 feet in height, with trunks 10 feet or 12 feet in diameter, are common—the remarkable thickness of its deeply-lobed bark, surpassing in this all other members of the Cypress tribe, its graceful beauty in youth, with its delicate feathery branches and drooping leading shoots, and the nobility of its port at maturity, give exceptional interest to this tree. Restricted in distribution to a narrow strip of the Southern Oregon and Northern California coast, with outlying stations on the head-waters of the Sacramento River, Lawson's Cypress exists under very different conditions from those in which it flourishes naturally, and from New York southward it may be seen in a fairly vigorous condition, although it never, perhaps, grows so luxuriantly in the Atlantic States as in Western Europe. In New England, unfortunately, it merely survives in sheltered positions, and we shall have to give up the idea of using this tree here in general planting. The tendency of Lawson's Cypress to variation is remarkable, and more than sixty varieties have been named by European nurserymen. This tree is universally known in the forests of Oregon and the lumber-yards of San Francisco as the Port Orford Cedar, from the harbour on the Oregon coast, where the lumber is largely shipped to San Francisco. The wood is light, hard and strong, and abounds in a fragrant resin, which makes it exceedingly durable. For many years it has been used in large quantities in California for the insides of houses and in boat-building, and from this wood the matches used on the Pacific coast are made.—*Garden and Forest.*

#### A FALSE GENUS.

THE Retinosporas now familiar to the cultivators of coniferous plants all belong to Cupressus, and are all forms of two Japanese trees, Cupressus obtusa and C. pisifera, although some of them appear so distinct that it is sometimes hard to realise, until the appearance of a normal branch discloses the secret of their origin, that they are merely monstrosities that have been cherished and propagated, perhaps, for centuries by the Japanese.

CUPRESSUS OBTUSA (the Hi-no-ki of Japan) is a native of the southern mountain provinces and the most valuable timber tree of the empire. It is planted in the neighbourhood of all Shinto temples, which are built of its wood. It is also cultivated for its timber in the mountain forests of Central Japan, where it often attains the height of 100 feet, with a tall straight trunk 3 feet in diameter near the ground and free of branches for 50 feet or 60 feet. The wood is light, strong, tough, and very durable in contact with the soil, pleasantly fragrant like that of the other species of this section, and white, straw colour or pink. The palaces of the Mikado in Kioto were made from the wood of this tree, which also serves for the frames of Buddhist temples and the interior finish of expensive houses. In Japan Cupressus obtusa is one of the favourite subjects for dwarfing, and is often cut into eccentric shapes, and several abnormal varieties or juvenile forms are cultivated. Cupressus obtusa aurea gracilis is a free-growing and beautiful form of this tree introduced into our gardens a few years ago. There are dwarf bushy forms in cultivation in this country and Europe, some with leaves of normal colour and others with yellow foliage. These are highly prized in Japan, and can be seen in almost every Japanese garden. A distinct form known as Retinospora lycopodioides has stout erect branchlets densely clothed with bluntly awl-shaped, very dark green leaves, and another, Retinospora filicoides, is peculiar in its long, slender, spreading branches covered with short, broad, light green sprays of quadrangular branchlets.

CUPRESSUS PISIFERA (the Sawara of the Japanese) is planted in their forests and temple grounds

with Cupressus obtusa, and produces redder, coarser-grained, and less valuable wood. The common Golden Retinospora (Retinospora pisifera aurea) is a form of this tree, and is here, perhaps, the most frequently cultivated of the Japanese Retinosporas. A more remarkable form is the so-called Retinospora squarrosa, in which all the leaves are short, pale blue-green, and spreading or slightly bent toward the branchlets. This is a low, broad, dense bush or small tree with large divided and forked stems. Almost as remarkable is Retinospora filifera, another form of this tree with long, slender, pendulous, thread-like branchlets clothed with dark green leaves arranged in remote alternate pairs; there is a yellow-coloured form of this plant. This is certainly one of the most remarkable of all pendulous-branched conifers, but, unfortunately, it is very capricious, sometimes flourishing with great luxuriance, but more often perishing from the cold of severe winters.—*Garden and Forest.*

**Spiræa arbuscula.**—This handsome Spiræa is an alpine shrub with erect, wiry, branching stems



*The White Bullace.*

terminating in small, compact corymbs of bright rose-red flowers. Its affinities are with Spiræa lucida, which is a larger plant with looser corymbs of white or pale rose-coloured flowers, and which grows at a low elevation in dry woods from the Black Hills of South Dakota to Southern Alberta and Eastern Washington, with Spiræa corymbosa of the Southern Alleghanies and with the Siberian and eastern Asiatic Spiræa betulifolia. It differs from Spiræa lucida in its dwarfer habit, in its smaller and much more compact flower-clusters, in its bright red stems covered with thin lustrous bark, and in its smaller leaves. Spiræa arbuscula grows at Glacier, on the Selkirk Mountains, in British Columbia, and southward along the Cascade Mountains and the high coast ranges of Washington and Oregon and along the Sierra Nevada of California to the centre of that range. On the Olympic Mountains in Washington it forms dense low mats at the timber-line at an elevation of 5000 feet above the sea, while on Mount Ranier, on the opposite side of Puget Sound, it ascends 2000 feet higher, enlivening in August rocky cliffs with its brilliant flowers.—*Garden and Forest.*

## ORCHARD AND FRUIT GARDEN

### BULLACES.

BULLACES are seldom met with, this fact being no doubt attributable to the erroneous idea that the quality of the fruit is far inferior to that of the Damson. Even were this true, Bullace would, I maintain, pay for growing, not on account of their free-bearing character, but because the fruit hangs on the trees long after Damsons have fallen, even well into November and when once the markets are cleared of the general run of popular Plums and Gages, the public, having no other alternative, eagerly buy any late consignments. Probably no Bullace trees are grown in Essex, Suffolk and Norfolk than in all other counties put together. The variety most commonly met with is the Small White, round in shape, and mottled with red on the exposed side. A three varieties ripen in October, but impro-

in flavour if allowed to hang on the trees till November. Bullaces also make delicious jams are excellent when bottled, and in East Ang Bullace pie is held in high esteem amongst farm labourers and cottagers generally.

Bullaces, more especially the common white variety, are not particular as to soil, grow and thriving fairly well in a compost that would almost starve the Damson. One of the chief recommendations of this fruit is the extreme hardness of its blossom, it being but seldom that the crop is lost through frost. On the account those who grow Bullaces for sale usually plant them on the margins of orchards as a screen for more tender fruits. On one estate in Sussex there are rampant hedges formed of Nut trees and Bullaces. They both grow well together, and in autumn the joint crops are both profitable and interesting. In South Notts the name Bullace is almost unknown, the fruit being known by the term Wint Crack. The Essex Bullace is somewhat larger than the common white, having a yellowish

en skin and a more juicy, sweeter flesh. The Royal Bullace has much larger fruit, the yellowish skin carrying a thin grey bloom, the flesh brisk, but refreshing, and splendid for its.

**Early Peaches.**—Without the expense of heat and only a little protection afforded by glass case sufficient to keep out frost, and with a little management in the way of taking advantage of every bit of sunshine, ripe Peaches can now be had from at least the end of June until the end of September. Certainly this early date has been attainable now for many years by the aid of Early Beatrice, but it is a very small fruit and not comparable to the newer Alexander, Waterloo or Amsden June. It would be interesting to learn from practical experience which of the three is really the best, as in the majority of gardens not more than two first early trees would be planted, and there is not much difference in them from a flavour standpoint. The preference should decidedly be given to the best and most persistent cropper. It may be that they vary on different soils; certainly one hears very different opinions expressed as to their respective merits. Personally, I have found Waterloo the best, and sold hold fast by this as the first early. Alexander is fairly good, Amsden June poor. For succession, therefore, I should recommend Alexander, Early Louise, Hale's Early and Early Osse Mignonne, the first and third under the best case with two early Nectarines to keep them company, and all four of the Peaches outside. Early Louise is only included because it sometimes fills a gap before Hale's Early is ready. Of soil being naturally light, with sand not far below the surface and no facilities for supplying a stronger compost in quantity, is not an ideal one for Peaches. A mixture of stiff road sidings and cow manure, both with the natural soil at planting and as an occasional top-dressing, is a great assistance. The sorts already enumerated succeeded by Alexandra Noblesse, Dymond and Goshawk, three of the most reliable mid-season varieties on this soil, and these in their turn by Barrington and Walburton Admirable. Princess of Wales does well under glass, but is not a success out of doors.—E. BURRELL.

**PLANTING THE FLOWER GARDEN.**

I enclose a rough sketch, which is not drawn to scale, of flower beds laid out here two years ago, which I should be very glad to receive a little glance. The beds are cut out of the turf, and on a slightly lower level there are two other terraces exactly similar, both terraces being enclosed by a Yew hedge. I first planted all with perennials. I found, however, that the beds were too small to allow large showy perennials to grow, and the smaller ones proved to be ineffective. As this formal piece of garden is just under the windows of the house and has a lawn on each side of it, I require some bright masses of colour, and yet at the same time I wish to avoid long intervals of barrenness and also the necessity of constant planting. This year I planted the upper terrace with Tulips for the spring and Phlox Drummond and Verbenas for the summer. The latter have done exceedingly well, but have absolutely killed the lower terrace with its perennials by contrast.

Will you kindly advise me whether I should persevere with perennials only, and, if so, with what kinds, or should I employ annuals? If the latter, I should be much obliged for any suggestions, as I wish to avoid Geraniums, Calceolarias, &c. and yet I want to have the beds in beauty at the same time. I also desire to avoid planting them with bulbs, as that is costly, and I have bulbs in other parts of the garden, especially in the wild garden.—C. A. C.

As no doubt your case is a typical one of many, we propose to answer it a little more at length. You rightly see the need of getting rid of the two plantings a year, which is fatal to all

permanence in flower gardening and lands us in bare earth in spite of all at some of the most interesting times of the year, as, for instance, an autumn like the present, when in any real flower garden there is much beauty of Tea and Monthly Roses and even Carnations. Any system which pulls all this up to put in bulbs and other things in September or October must for ever be a bad one. We have seen flower gardens in October or November this year which were quite beautiful. The mixed way is the only lasting and artistic way in the flower garden—that is to say, that while one may have leanings to one beautiful race of plants, as Roses and Carnations, the best way is to support these with the choicest of all other things, from rock plants to Tea Roses, to thoroughly prepare the beds to last at least seven years, and in some way to plant them permanently, whether with choice shrubs, Roses, or very choice perennials and rock plants as carpets.

Very coarse perennials and those of short bloom, as many of them are, should never be put very near the windows of a house, excepting those that have some beauty of foliage to last them through the year. Annuals are an excellent aid, but they are best for borders in the kitchen garden, or in some place apart, owing to the need of annual sowing and preparation of the ground, which is impossible in a beautiful flower garden. Another reason for the permanent planting of the flower garden is that there is so much to be done if we are to get in all the best that can be got in. It cannot be done at any one time of the year, but we must have the whole of the winter for the work, because each bed should be prepared and planted with much more thought than in the scratch way so common. If, however, you wish for colour in flat masses, in circles or lines, you cannot have it in this way, but colour in natural and artistic ways may be had easily and even effectually by grouping.—Ed.

**PLANTING SHORE LAND.**

(1) I LIVE near Land's End and close to the sea, where the wind has enormous power and the sand, unless bound together by some vegetation, is continually blown inland. Part of my land is composed of this loose sand, much of which, however, is covered with a species of coarse grass, sending out long knotted shoots under the surface, thus tending to bind the sand together. I am anxious to clothe more of the sand in the same way, and have been recommended *Panicum arenaia*. Can you tell me where the seed of this grass or any other equally suitable can be had at a low price, so that it could be freely used? What should be the price per lb.?

You must buy this plant where it is commonly used for planting the sandhills, or seed may be bought from some of the large seed houses at about a shilling a pound.

(2) On other portions of my ground I have sown common Furze, and the plants are doing extremely well. I wish to vary it with the dwarf Furze. Where can this seed be procured cheaply and what should be the price per lb.?

You might save it yourself with some trouble, but it would not be worth while, and may be obtained from large tree seed houses, value about 1s. per pound.

(3) I wish to sow with the dwarf Furze some seed of the common Ling and Heath, so that in time they may grow to such perfection of exquisite beauty as they do on the Cornish cliffs and downs. Is there any place in Scotland where the seed can be got cheaply?

Better plant Ling and Heaths. Common Ling may be had on commons near you; the other Heaths from good shrub nurseries.

(4) I sowed Broom at the same time as the Furze which has done so well, but none of the Broom came up. What is the right time to sow it, and will it stand the sea as well as Furze?

Sow Broom in April and protect from rabbits. It will withstand the sea breeze.

(5) I have succeeded very well indeed with Tamarisk cuttings and plants, particularly with the former, but should like to know what other shrubs there may be easily raised from seed or cuttings which will stand the salt gales as Tamarisk does. I find the Veronicas do well in shelter, but that no shrubs will live in exposed places but Tamarisk, Furze and Heath.

See Buckthorn and small-leaved Willows.

(6) Will Sea Holly grow well from seed, and when should the seed be sown?

Yes: sow in spring or in early autumn as soon as seed is ripe.

(7) Is the Sea Pine mentioned as growing on the French sea-coast likely to do well?

Yes, we should say so.

The ground referred to is for the most part rough and sandy and with but little shelter. It slopes steeply to the west and has to bear the full brunt of the Atlantic gales. In the summer it suffers a good deal from want of moisture, and it contains a great deal of granite. But where there is shelter the vegetation is luxuriant. My chief object is to bring the ground back to what it once was in part, the very beautiful cliff land, glowing with the mingled blossom of Heath and Ling and dwarf Furze in autumn, and in spring brilliant with the larger Furze, with great patches of Foxgloves and other flowers here and there among the granite. The usual attempts at ordinary flower gardening are made in the neighbourhood, and in exposed places are, from a picturesque point of view, lamentable failures, whereas at the same time the cliffs, downs and lovely old granite ledges are indescribably beautiful and luxuriant. A. H. P.

Cornwall.

**SOCIETIES AND EXHIBITIONS.**

**ROYAL HORTICULTURAL SOCIETY.**

NOVEMBER 23.

THERE was a most marked improvement in the extent of the exhibition on the above date. The three long tables were well filled, and on the sides also were numerous exhibits. The work of the committees appears to have been fairly well distributed, each having a good attendance. Chrysanthemums were still in the ascendant, making a brave show. Of these the finest group came from the Rycroft Nursery, constituting a most instructive lesson in floral arrangement, the noble effect produced by associating large exhibition blooms in appropriate vases of massive outline and chaste design being an object-lesson to growers of the Chrysanthemum for decoration as well as for exhibition. Other exhibits of the Chrysanthemum were likewise in good character, notably those from the Earlswood Nurseries. Again we have the pleasure to record a finely-grown exhibit of *Begonia Gloire de Lorraine*, on this occasion from a private garden. Another reasonable exhibit was a group of well-cultivated *Poinsettias*, dwarf plants with fully-developed heads of scarlet bracts. Of reasonable plants for out of doors, note should be made of the profusely berried plants of *Pernettyas*. Another exhibit was that of decorative arrangements of Chrysanthemums combined with autumnal foliage, too much crowded to be seen to the best possible advantage.

Amongst Orchids, the most interesting exhibit by far was the group of hybrids from Messrs. Veitch, which in itself constituted an excellent illustration of the progress made by the hybridist during Her Majesty's reign, more especially in the last decade. *Cattleyas* and *Cypripediums* abounded here. Other good groups and minor exhibits assisted in making an excellent display in spite of the very unfavourable weather of late. Fruit, as regards extent, was not largely shown, the most noteworthy exhibit being that of pot-grown examples of Apples from the celebrated

Sawbridgeworth collection, perfect in finish. A new Grape from the same source to which an award was made, commends itself by its flavour alone, to say nothing of its colour. The competitive classes still produce a good contingent of exhibits, the best known kinds from the point of flavour still holding their own. These compared most favourably with an exhibit of a new Apple, to which an award of merit for some reason was made, possibly for its colour, certainly not, we should think for its flavour as a dessert fruit, and positively not from the point of size as a kitchen Apple. There was also a finely grown exhibit of Onions, in size immense and well ripened, useful no doubt to save for seeding another year, but from the utilitarian point of view of far less importance.

The weather being most gloomy by reason of the dense overhanging fog the light in the Drill Hall was very bad, it being almost impossible to take correct note of colours in many instances. Surely it would be possible to cleanse the glass on the roof and otherwise decorate the interior of this gloomy structure so as to ensure at least the maximum of light possible on all such occasions.

The afternoon lecture on exhibitions, with suggestions as regards the management of shows and points of note to exhibitors and judges, was delivered by Mr. John Wright to a poor audience; the attendance no doubt at this meeting being far less than it otherwise would have been by reason of the fog.

#### Orchid Committee.

Awards of merit were adjudged to the following:—

**ODONTOGLOSSUM DAYANUM.**—A distinct and pretty variety, undoubtedly a natural hybrid between *O. gloriosum* and some other species. The sepals and petals, about  $1\frac{1}{2}$  inches in length, are pale greenish yellow, thickly spotted with small reddish brown spots; the lip greenish yellow, with a broad blotch of brown in the centre and a white crest, with numerous prominent bristles. A plant with seven flowers was sent from Baron Schroeder, The Dell, Egham.

**CATTLEYA LABIATA WHITE QUEEN.**—In this the sepals and petals are pure white; the lip white, with a slight rose blotch in the centre and some yellow at the base. A fine plant with four flowers came from Mr. W. P. Birkenshaw, West Hill, Leeds.

**CATTLEYA EMPRESS FREDERICK VAR. LEONATA** (*C. Mossie* × *C. Dowiana*).—A lovely hybrid with deep rose sepals and petals, of fine form and substance. The large lip is deep crimson-purple with a fringed rose margin, the side lobes rose-purple, heavily veined and lined with the yellow of the *Dowiana* parent through the throat. It is one of the finest hybrid *Cattleyas* we have seen. From Messrs. J. Veitch and Sons, Ltd.

**LÆLIA OLIVIA** (*L. crispa* × *L. xanthina*).—The sepals and petals are pale yellow about  $2\frac{1}{2}$  inches in length; the lip orange, heavily suffused, and lined with crimson; the side lobes lighter veined with yellow. It is a distinct and lovely variety, giving promise of a fine thing as the plant becomes stronger. From Messrs. Veitch and Sons.

**CYPRIPEDIUM BECKMANI.**—The parentage as recorded was considered doubtful. It was said to be the result of crossing *C. Boxalli superbum* and *C. bellatulum*, but no trace of the latter parent could be observed. The dorsal sepal is green margined with white, and thickly spotted with dark brown; the broad fine-shaped petals green at the lower halves, becoming suffused with dark brown and pale green, spotted with brown at the base. From Messrs. Linden, Brussels.

Botanical certificates were awarded to Mr. R. I. Measures, Cambridge Lodge, Flodden Road, Camberwell, for *Cirrhopetalum refractum*, a distinct form with long yellow connected sepals and purple petals; also to Messrs. F. Sander and Co. for *Maxillaria elegantula*; the sepals white at the base, and suffused with purple at the apex, the petals white, yellow spotted with purple at

the apex, the lip light yellow in front suffused with purple at the edges.

Messrs. J. Veitch and Sons sent a choice and interesting group. The most prominent amongst the numerous fine hybrids were two good forms of *Lælio-Cattleya Pallas* (*L. crispa* × *C. Dowiana*), the sepals being creamy white slightly suffused with rose. The petals having the twisted characters of *L. crispa* are of a delicate rose shade of colour; the front lobe of the lip deep crimson purple, heavily fringed and margined with white; the side lobes rose lined with yellow, becoming suffused with a deeper shade of colour at the base. *L.-C. Statteriana* (*C. labiata* × *L. Perrini*) and *L.-C. Decia* (*C. Bowringiana* × *C. Dowiana*) with extra dark sepals and petals, were also shown. Among the numerous *Cypripediums* were grand forms of *C. Leeanum*, *C. Niobe*, *C. cænanthum superbum*, *C. Acteus* (*C. Leeanum* × *C. insigne Sandere*) in which the flowers are considerably lighter, *C. Prospero* (*C. Spicerianum* × *C. insigne Sandere*), a good form of *C. lo grande*, *C. Tityus*, and numerous other fine forms. Finely-flowered *Zygopetalums* and *Oncidiums* were also included. A silver Flora medal was awarded. Messrs. F. Sander and Co. sent a small but choice group, which contained numerous fine forms of *Cypripedium Leeanum*, *C. Calypso-Leeanum*, derived from the parents indicated in the name, and having the intermediate characteristics of both hybrids, *Habenaria carnea*, *Dendrobium Johnsonæ*, and a fine plant with two spikes of flower of *Cymbidium Winnianum*. Amongst *Calanthes* were fine spikes of *Calanthe bella* and *C. Florence*. *Phaius Ashworthianus*, and *Chondrorhyncha Chestertonæ* with creamy sepals and petals, the heavily fringed lip creamy white with numerous brown spots on the disc, were also sent (silver Banksian medal). Messrs. H. Low and Co. sent a large and interesting group, amongst which were several fine forms of *Cattleya labiata*, finely-flowered *Odontoglossum crispum*, numerous *Cypripediums*, finely-flowered *Oncidiums*, and *Vanda cœrulea*. A silver Flora medal was awarded. The Right Hon. J. Chamberlain was awarded a silver Banksian medal for a choice collection of hybrid *Cattleyas* and *Lælio-Cattleyas*. The most prominent was *L.-C. Clive*, the sepals pale rose, the petals deeper in colour than the sepals, of fine form and substance, the lip rich crimson-purple, veined with darker purple, mottled and fringed with yellow. It is the result of crossing *Cattleya Dowiana* and *L. prestans*. *L.-C. Gotoiana* (*C. Warneri* × *L. tenebrosa*), with three flowers; *L.-C. albanensis* (*L. grandis* and *C. Warneri*), *L.-C. corbeilensis*, a form of *L.-C. Aurora*, with a dark front lobe to the lip; and *L.-C. Ophelia* and *C. Miss Williams* were noteworthy. Mr. R. I. Measures sent a new *Cypripedium* named *Siron* (*C. niveum* × *C. venustum Measuresianum*). The ground colour of the flower is white, thickly covered with reddish brown spots, the dorsal sepal and petals veined with green. Mr. W. B. Latham, Birmingham Botanic Gardens, sent a new hybrid *Cypripedium* named *C. Dudmanianum* (*C. Spicerianum* × *C. Chamberlainianum*), in which the characters of both parents are apparent. Mr. P. Crowley, Croydon, sent two good forms of *Cattleya labiata*. The Hon. P. Allsopp sent forms of *Cypripedium insigne montanum*. Captain Holford, Westonbirt, Gloucester, sent cut flowers of *Cypripediums*, and a collection of cut Orchids was sent by Mr. W. H. Lumsden, Balmedie, Aberdeenshire.

#### Floral Committee.

Awards of merit were made to—  
**BEGONIA JULIUS**, one of the hybrids resulting from crossing the winter-flowering *B. socotrana* with the tuberous section. The plant in question shows a most distinct advance both in habit of growth and in freedom of flowering. The leaves are of moderate size only, more robust than in the tuberous type, being also set on short foot-stalks. The plant shown bore several stout trusses well furnished with blossoms of average size, the colour being a soft shade of rose-pink; the flowers are also double and of good form. From Messrs. J. Veitch and Sons, Chelsea.

**CHRYSANTHEMUM MARY MOLYNEUX** (Japanese incurved).—A very promising exhibition variety having the essential elements, of extra size in fine form, being also very full. The colour is pale blush-pink with silvery reverse. From Mr. C. J. Garnier, Rookesbury Park, Fareham (gardener, Mr. N. Molyneux).

**CHRYSANTHEMUM MRS. H. FOLKES** (Japanese reflexed).—A pure white variety, with close, full flowers, the petals prettily curled and the form good. This was shown in good condition to From Mr. J. E. Strachan, Hemel Hempstead (gardener, Mr. Folkles).

**CHRYSANTHEMUM JULIA SCARAMANGA** (Japanese reflexed).—A remarkably fine new variety, an one of the very best additions of the year. The flowers, grand examples of culture, were equal in size to large blooms of *Mme. Carnot* and of some what similar outline and form. They are of colour a rosy-shaded terra-cotta, the graceful character of the flowers adding to their beauty. From Mr. Wells, Earlswood Nurseries, Redhill.

**CHRYSANTHEMUM GEORGIANA PITCHER** (Japanese incurved).—A very fine and most distinct variety with broad and massive florets, which incur sufficiently to avoid any undue formality in outline. The colour is a pale lemon-yellow, and the flowers of extra size. From Mr. Wells.

**CHRYSANTHEMUM MRS. F. A. BEVAN** (Japanese reflexed).—A beautiful variety, not of too large dimensions, being what may be termed in an exhibitor's phraseology, "a deep front-rose flower." The colour is a soft silvery pink, very distinct and most attractive by reason of its colour. From Mr. Wells.

A vote of thanks was accorded most unambiguously to M. Anatole Cordonnier, Bayona, France, for a promising white Japanese variety named *Don de la Madone*, of which more was possibly be heard.

A superb group of cut *Chrysanthemum* arranged with exquisite taste, was staged by Mr. H. J. Jones, of Ryecroft Nursery, Lewisham, S. It occupied both sides of a table running the length of the hall, and formed one of the most attractive and striking features of the show. The arrangement was carried out with rare judgment and skill, the result being a display not only most artistic, but calculated to exhibit the bloom to the best possible advantage. Down the centre of the table ran a line of graceful *Crotons* and *Palms* interspersed with large and handsome arrangements of massive blooms in vases of very suitable form and material. On the tables were boards of flowers in exhibition style, each board being separated from the next by about half a dozen varieties in bunches of three, these being much higher than the boards, and thus avoiding any monotony or formality. Nowhere was there any suspicion of over-crowding or of clashing colours. The Ferns, small *Dracenas* and *Crotons* used for groundwork, were all likewise of the highest quality. As regards the *Chrysanthemum* themselves, they deserve the highest praise. The blooms were splendidly grown and finished, and in the freshest possible condition. One of the most striking things was a box of grand flowers of *Western King*, one of the finest whites in cultivation; every bloom was excellent in form, perfectly pure, and delightfully crisp in the petal. Mr. H. Godfrey, Mrs. A. Cross, Duchess, Wif, a splendid white incurved; *Mlle. Théa Rey*, W. Wright, a remarkably graceful bloom, Japanese reflexed, with long, loose, rather narrow petals, the colour a delicate pink with creamy white centre; *Mlle. Laurence Zédé*, large and very pretty incurved Japanese, of colour shaded lilac; *Yellow Mme. Carnot*, a large bloom with narrow and intermingling florets and *Australie*, of great size and beauty, of lilac in colour, the backs of the petals silver were also good. This exceptionally fine exhibit was awarded a silver-gilt Flora medal. Another very fine group of cut *Chrysanthemums* was staged by Mr. W. Wells, Earlswood Nurseries, and contained Japanese, incurved, singles and pompons. A few of the best varieties were *Jas Scaramanga*, a new and very striking brot

low Japanese; Surpasse Amiral, G. J. Warren, Duchess of Fife, Georgiana Pitcher, a huge light yellow bloom with thickly twisted petals; Mlle. Laurence Zedès, very fine blooms; Oceana; a new pale green variety, incurved Japanese in form. M. Edouard Roger; Mrs. F. A. Bevan, a new Japanese reflexed of delicate rosy lilac colour; Eastone, a loose incurved Japanese, yellow and gold; and Australia. A word of praise must be given to the beautiful singles which Mr. Wells always shows in such good form and such great variety. They are excellent for cutting, while their lasting qualities are unrivalled. This very interesting group obtained a silver-gilt Banksian medal. Cut blooms were shown by Mr. R. Owen, of Maidenhead, among the finest being President Carnot, Glory of Maidenhead, Royal Standard, and Glaring, a vivid orange and yellow variety (bronze Banksian medal).

A small, but pretty collection of cut Chrysanthemums was staged by Mr. A. H. Rickwood, gardener to the Dowager Lady Freake, Fulwell Park, Twickenham. The blooms were clean and fresh, though not large (silver Banksian medal). M. F. Cubberley, gardener to Mr. J. W. Temple, Leewood, Groombridge, was awarded a silver-gilt Banksian medal for an excellent group of Bona Gloire de Lorraine. The plants, which were strong and well grown, were literally covered with their bright pink blooms and made a gorgeous display of colour. A silver Banksian medal went to Messrs. Cripps and Sons, of Tunbridge Wells, for a group of admirable plants of Poinsettias. The beds of scarlet bracts were very dazzling and made a very effective group. Messrs. Veitch and Sons exhibited a small group of Begonia Mrs. H. J., a pleasing rosy-red variety with handsome and substantial foliage. Messrs. Hugh Low and Co. again showed their new Carnation Winter Comet, which was described in these columns at the last meeting. Messrs. Cutbush and Son were awarded a silver Banksian medal for a group of Plectya mucronata seedlings, all dwarf, bushy plants, very heavily berried. Mr. L. H. Calcutt staged stands and vases of Chrysanthemums, the arrangement in most cases being very graceful and in light. A silver Flora medal was awarded.

#### Fruit Committee.

There was a fair quantity of exhibits before the committee. The light was bad and some of the best fruits could not be examined. The Messrs. Rivers had grand Apples well meriting the award given, also a new Grape. Vegetables were not numerous. The Veitch prizes for flavour were well contested, but brought forth nothing new. Awards of merit were given to

**RAFE DIRECTEUR TISSERAND.**—Berries round, good size, bluish black in colour and of good flavour. It is a very distinct variety and evidently a good keeper. From Messrs. Rivers and So Sawbridgeworth, Herts.

**APPLE LADY FALMOUTH.**—A medium-sized fruit, somewhat flat, with large open eye, scarlet on the exposed side, flesh firm and of good quality, a good winter dessert variety. From Mr. G. Chambers, Beech Farm, Mereworth, Maidstone.

Messrs. Rivers and Son sent six baskets of Apples in as many varieties. Peasgood's Nonsuch was remarkable for colour and finish, King of Topkins Co. was very fine, and the newer Bijou, a very pretty small Apple, was very well grown and brilliant in colour. This is a favourite for the pot culture. There were grand Cox's Orange and Gibbon Pippin with the less-known Buckingham, an American Apple, handsome, and of excellent quality. Gradiska, a white Grape, berries transparent and very refreshing, was also shown (silver Banksian medal). Mr. W. Bayford, Glewston Court Gardens, Ross, Hereford, sent thirty varieties of Apples, excellent as regards colour, variety, and size. Peasgood's Nonsuch was very fine, also Gloria Mundi, Warner's King (a little superior to its best), and Tower of Glamis. Striped varieties, Golden Noble, Queen Caroline, and other Peasgood varieties, with Cox's Orange and Bannockburn's Red Winter Reinette, very highly coloured, were also sent (silver Banksian medal).

Mr. E. Beckett, Aldenham House Gardens, Elstree, Herts, staged a collection of Onions, large bulbs, sound and shapely, and arranged in heaps in quantity. Ailsa Craig was one of the best, and Anglo White Spanish, a flatter bulb, was very large, as were Prizetaker, Cranston's Excelsior, Sutton's A 1, Cocoa-nut, and Barnet Hero, the last a very solid bulb and long keeper (silver Banksian medal). Apples were sent by Mrs. Jackson, Beechwood Lodge, Carshalton, and Messrs. Jefferies and Sons, Royal Nurseries, Cirencester. The Cape Gooseberry was sent by Mr. Batchelor, Harefield Park, Uxbridge, nice fruits and well grown. Potatoes in variety (seedlings) were sent from the Surrey Seed Co., Redhill, but of no special merit.

The prizes for flavour brought forth nine dishes of Apples and five of Pears, the best Apple being Cockle Pippin, from Mr. Woodward, Barham Court, Maidstone, excellent fruits of this old favourite being staged, the second prize going to Mr. Bayford, Glewston Court, for good Cox's Orange. The best dish of Pears was Winter Nelis from Mr. Crook, Forde Abbey, Chard, Mr. Woodward being second with Nouvelle Fulvie.

#### NATIONAL CHRYSANTHEMUM SOCIETY. NOVEMBER 22.

The floral committee of this society met at the Royal Aquarium, Westminster, on the above date, Mr. T. Bevan occupying the chair. The display of novelties was less numerous, and the varieties awarded first-class certificates were as follows:—

**CHRYSANTHEMUM J. CHAMBERLAIN.**—This is a large spreading flower with long, broad florets, incurving at the ends. The colour is a brilliant reddish crimson, with a light bronze reverse. It should be a very effective bloom on the show-board. Sent by Mr. H. Weeks, The Gardens, Thrumpton Hall, Derby.

**CHRYSANTHEMUM MME. FERLAT.**—A large flower of massive build, with medium florets, tightly incurving, and making a bloom of capital substance. It is a splendid white companion to such sorts as Chas. H. Curtis, and a good back row flower. From Mr. W. Wells, Earlswood, Redhill.

**CHRYSANTHEMUM JULIA SCARAMANGA.**—A very large, loosely built, and spreading Japanese flower, with long, rather narrow curling florets, twisting and intermingling in a pretty manner. The colour from early and late buds varies considerably, flowers from the former being a pale rosy bronze, those from the latter being almost a rosy terra-cotta. Also from Mr. Wells.

A commendation was made in favour of Don de la Madone, a pretty medium-sized white Japanese bloom, with innumerable florets of only medium width, flat, recurving and twisting in a unique manner. This was sent by Mons. Anatole Cordonnier, Roubaix, France. The committee also wished to see again Mrs. A. E. Peaver, a promising incurved flower with fairly broad florets; colour bronzy yellow, inside of florets lined crimson.

A vote of thanks was accorded Mr. Chas. Gibson for an exhibit of six blooms of a white incurved Japanese named Mustapha. This was certificated last season. In its present form the blooms showed a number of crowns. Promising novelties were Japanese Mme. J. Chaure, a very deep maroon-crimson, bronze reverse, long florets, curling at the ends; Mrs. J. J. Glessner, rich golden yellow, tinted bronze, and staged as a market variety, having been grown in bush form; Lucien Remy, a medium-sized flower of a pleasing rose-pink shade, and admired for its colour; Surpasse Amiral, a bloom of massive build and having broad, slightly incurving florets of splendid substance, colour golden yellow, paler reverse.

Several dozen boards of blooms were exhibited by Mr. Wells, these including the latest novelties.

The general committee of this society held a meeting on Monday evening last at Anderton's

Hotel, Fleet Street, Mr. T. W. Sanders occupying the chair. The meeting was rather a lengthy one, and most of the time was taken up in discussing matters connected with the society's shows and other formal subjects, not the least important being the question of the bad light at the Aquarium on the occasion of the last show, and the illegibility of many of the labels on the exhibits. At shows of such a character no exhibitor ought, in Mr. Harman-Payne's opinion, to be allowed to write the names of the flowers in his exhibit in lead pencil.

The small gold medal recently decided upon was submitted for approval. On the motion of Mr. Dean, it was resolved that Mr. Higgs fill the vacancy on the classification committee caused by the death of Mr. R. Owen, and that the committee hold a meeting some time late this year or early next year to decide upon several varieties of doubtful classification.

Meetings of the general committee will be held next season on the following dates, viz., August 29, September 26, October 24, November 28, December 19, 1898, and January 16, 1899. The fixtures of the floral committee are September 6 and 26, October 11, 24, and 31, November 14, 21, and 28, and December 6 and 12.

The election of a number of new members brought the meeting to a close.

The annual dinner of this society took place at Anderton's Hotel, Fleet Street, on Wednesday evening, when the chair was occupied by Mr. T. W. Sanders. The large room was filled to its utmost capacity and the lengthy programme was not got through until a late hour. Amongst those present were Messrs. H. J. Laing, W. Wells, R. Dean (secretary), D. B. Crane, Leonard Browne, T. Bevan and those named below.

After the chairman had proposed the usual loyal toasts, "The Glorious Chrysanthemum" was the next on the list, which we presume signified the National Chrysanthemum Society. Mr. Sanders very ably reviewed its past history. Mr. Gordon proposed "Donors of Special Prizes," to which Mr. H. J. Jones, of Lewisham, and Mr. P. Waterer responded.

Much enthusiasm was shown when Mr. Scott, on behalf of the Bromley Chrysanthemum Society, received the national challenge trophy, won for the second time at the last November show at the Royal Aquarium. Mr. Mease came in for hearty praise when receiving the valuable awards, Holmes' cups, and other prizes won at the recent exhibition. He also received a painting of a Chrysanthemum flower. Mr. Norman Davis, of Framfield, also received a cup and gold medal.

With the many other toasts we must associate the names of Messrs. R. Ballantine, C. Harman-Payne, H. J. Cutbush, and Mr. Pearson, who replied for the horticultural press. The toast of "The Chairman" was thoroughly well received, as also was the one of the president, Sir Edwin Saunders.

In the course of the chairman's speech he mentioned that the number of affiliated societies was now 118, thirteen of which were from Kent, eleven from Essex, and seven from New Zealand.

We may well ask, however, if the old officers of the society, those we knew not many years ago, have forsaken its ranks. There seems a sad lack of support by the men who formerly worked hard to make the society worthy of its national character.

**The weather in West Herts.**—The weather has lately been singularly changeable, but, taken as a whole, the past week was a very warm one for the middle of November. On two days the shade temperature rose as high as 58°, and on one night the minimum thermometer in the screen never fell lower than 50°, which is about 2° warmer than would be seasonable at midday. On the other hand, on three nights the exposed thermometer showed 4° of frost. At 2 feet deep the soil is now 2°, and at 1 foot deep 3°, warmer than the November average. Rain fell on three days, but

the total fall for the month up to the present time is only one-third of what may be regarded as a reasonable amount for the same period. A little rain water has come through both percolation gauges the last two days, but before this there had been no measurable quantity for nearly three weeks. During the past fortnight only about five hours of clear sunshine have been altogether recorded.—E. M., *Berkhamsted*, November 19.

— Another mild and dry week. On two days the shade temperature rose to 56°, or about 10° higher than is reasonable. On the only really cold night the exposed thermometer showed 6° of frost, which is the lowest reading that has been indicated by it as yet this month. Notwithstanding the recent high day temperatures, the ground, both at 1 foot and 2 feet deep, is at the present time only about a degree warmer than is reasonable. No rain fell during the week, while the total measurement for the month, as far as it has gone, only amounts to about half an inch. The last six days have been very calm, the average rate of movement of the air at 30 feet above the ground being only 1½ miles an hour, and on the 21st the total record was only 6 miles, making this the calmest day in November, with one exception when the record was the same, for at all events the last twelve years. The past week has been a very foggy one. At 9 o'clock on the mornings of the 19th and 22nd, a house became quite invisible at a distance of respectively 10 yards and 11 yards. Notwithstanding the gloomy character of the weather generally, the sun shone brightly on one day for nearly six hours, and on another for four hours. My Dahlias, which had been lingering on in a crippled condition since October 7, were entirely killed by the frost of the night preceding the 19th inst., which is eighteen days later than the average date of their destruction in the previous twelve years, and, with the exception of 1894, the latest recorded during that period.—E. M., *Berkhamsted*.

## NOTES OF THE WEEK.

**Chrysanthemum Incomparable.**—This old variety with stiff florets of a yellow and red shade freely sprinkled with crimson spots, presents an attractive appearance. It is still worth cultivating, though little seen of late.

**Androsace macrantha.**—This is a very distinct species with large sessile leaves, which are slightly formed at the tips. It produces rather stout spikes and numerous pure white blossoms. The species is as yet scarcely in general cultivation, but appears to be a vigorous grower and free bloomer.

**Poinsettia pulcherrima.**—A magnificent group of Poinsettias, from the nursery of Messrs. Cripps, Tunbridge Wells, was a feature at the Drill Hall on Tuesday last. The heads were very fine all round, splendidly coloured, and the handsome foliage came down to the pot. Throughout the plants were uniform in size and of great brilliancy.

**Chrysanthemum Mignonette.**—This is one of those small varieties with Thistle-like heads of florets, which in an arrangement of cut flowers are not only light and elegant, but almost unique in effect. More than this, they are a welcome change from the host of Savoy-shaped heads that so often represent this group of autumn flowers.

**Pelargonium A. Tutlet.**—This is a fine scarlet variety, said to be a sport from the well-known Raspail Improved. So far as distinctness is concerned there is little doubt, the blossoms being very large, exceedingly brilliant in the scarlet hue, and the outer petals well formed and clearly defined. The flowers of the variety are much larger than those of the type.

**Bouvardia Maiden's Blush.**—A very pretty and useful kind for pots or for cut blooms that should be grown freely by all who have to supply useful flowers for personal adornment. When well grown and a few of the lower lateral flower buds removed it is easy to secure a nice spray of blossom and ample stem. In a cut state these flowers take up water more readily if a clean cut is made, but if broken they are sometimes bruised.

**Sweet Pea Celestial.**—A large bunch of this variety appeared at the Royal Horticultural Society

this week. The gathering came from Exmouth, and was said to be cut from a fully exposed position in the open. So far as the flowers were concerned these were quite fresh and good, almost equal to summer flowers. Near London, however, the few remaining blooms in the garden appear as though a shower of soot had fallen upon them.

**Chrysanthemum Mrs. H. Folkes.**—This variety obtained an award of merit on Tuesday last at the Royal Horticultural Society, and is a Japanese of the purest white. The variety came from Mr. C. E. Strachan, Hemel Hempstead, and some half-dozen of its handsome flowers with fully 2 feet of stem quickly attracted attention. Good points in the variety are the length and strength of the peduncle, the blooms being shown without any support.

**Skimmia Foremani.**—Some branches of this handsome berry-bearing shrub from the garden of Mr. A. Kingsmill were brought before the floral committee of the Royal Horticultural Society the other day. The berries are exceptionally bright and effective, and appear in large clusters amid the pale green leathery foliage. Even in pots these plants are of considerable value, when it is remembered they retain their berries for many months in succession.

**Paper-white Narcissus.**—At the present time there is quite a glut of this in the London and provincial markets—so much so that it is hawked throughout London at almost every turn at one penny per bunch of twelve sprays—a fact that tells its own tale. There is also a bountiful supply of Roses, mostly French, of course, but really very charming for the season, and lovely buds of these are freely offered at two for a penny.

**Begonia Julia.**—This promises to open out a new era in winter-flowering Begonias. The variety in question is of a salmon-pink shade and double, and is the outcome of a cross between a tuberous-rooted variety and *B. socrotana*. It distinctly favours the tuberous section: indeed the plant in question, save for the fact that it is in the prime of its flowering at the end of November, differs but little from a tuberous kind in midsummer.

**Pernettya mucronata.**—A large number of Pernettyas, mostly seedlings in variety, from Highgate, was sent to the Royal Horticultural Society on Tuesday by Messrs. Cutbush. In some instances the bushes were very compact and carried immense quantities of berries in clusters. These plants are highly attractive in those gardens that suit them, and for winter work are especially valuable. Some fine bunches of the pure white kind were sent from Mr. Kingsmill's garden at Harrow Weald.

**Carnation Countess of Warwick.**—We have seen blooms of the above which was referred to at p. 398. It is certainly a very fine variety, the flowers large, well formed, and of a peculiarly bright shade of colour. It is a seedling from Winter Cheer crossed with Uriah Pike, and has the free branching habit of the seed parent. The colour is not quite so deep as in the pollen parent. It has a rich Clove perfume, and is likely to become a general favourite with those who grow Carnations for winter flowering.

**Carnation Wm. Robinson.**—When seen in good condition this is certainly a fine scarlet of the tree or perpetual class, and for such there is plenty of room. The habit of the plant, however, is somewhat tall, and, like all the scarlet-flowered kinds when giving their flowers in winter-time, it produces many discoloured and therefore useless blooms. The prevalence of fog during the past few weeks has not in any way improved it in this respect. A race of winter-flowering Carnations capable of enduring London fog would be indeed a boon.

**Primula verticillata.**—In the greenhouse at this season the fine whorls of yellow blossoms of this plant are always attractive, more so where the plants have been grown with this object in view. It is an Abyssinian species, and therefore quite unreliable for the open garden. But, given the same treatment from seed as the forms of *P. sinensis*, it is quite as attractive as these when in

flower, and possesses a beauty of foliage that quite unique. Grown in a rather rich sandy loam, the plant is strong and robust, and flows profusely for weeks in succession.

**Primula obconica fimbriata.**—The variety forms that are produced from a small packet of seed of this variety hold out additional hope that in a few years considerable improvement may be expected both in size and colour. Even now the flowers are much larger than in the original, and coming in equal, if not even greater, number prove much more attractive than those of the type of some fifteen years ago. In some of the forms of the above there is a distinct eye, greenish yellow, almost paste-like substance, in the Auricle, only much less pronounced.

**Calla Little Gem.**—Though considerable was made when this variety was introduced, can scarcely be said to have kept up its reputation. The flower by itself is certainly pretentious enough, but, unfortunately for those who grow it, not only are the spathes small, but the colour of these is distinctly poor also, and therefore unlikely to please those who have to produce flow in quantity. More than this, in a large batch seedlings of the old form there are many which while being produced with much greater freedom are scarcely distinguishable from the above, and from their smaller stems are well suited for qu small glasses.

**Carnation Flora Hill.**—This is an American variety with pure milk-white flowers, and belongs to the tree or perpetual-flowering section. Tuesday last several plants of it from Mr. G. Frey came before the floral committee of the Royal Horticultural Society. The variety, however, failed to obtain any award, as owing to the manner of packing scarcely a flower remained unbroken so much so that it was impossible to form an opinion respecting its general freedom of blooming. The habit is somewhat tall and the growth medium. The flowers are fairly large and generally distinct, so far as could be determined from the unfortunate condition of the plants.

**Begonia semperflorens rosea.**—As a winter-free-flowering kind with vigorous constitution this easily-grown plant should commend itself all. Strictly speaking, the variety gigantea, which the remark applies, appears more or less perpetual flowering, and to secure winter blooming examples, stock must be grown to that end. With successional batches of cuttings, occasional pinching, and growing in the open in rat sheltered frames, a good bloom may be ensured during the greater portion of the winter. Even quite small plants contribute their quota of blossoms, and with continued growth the flowers produced at every lateral. Very attractive, they are the large somewhat succulent leaves.

**Schizostylis coccinea.**—I send you a spike of *Schizostylis coccinea* from the open. I do not remember ever having the flowers fine as this year. I have grown the plants usually in front of a vinery or any warm sunny position as well as in pots, although in pots they seem quite satisfactory. The position the plants now occupy is a south border in front of the Peach wall. They have been planted two years. This season they had the advantage of a good watering once or twice throughout the dry summer and once a dose of liquid manure. At present time I could cut several hundred spike-brilliant scarlet flowers, these being useful for house decoration. They go on expanding all being cut and placed in water. If the fact flowers are picked off and fresh water given they will last a long time.—A. LEE, *Baulieu, Southampton*.

**Names of plants.**—J. C.—1, *Cupressus sempervirens*; 2, *Retinospora obtusa*; 3, *Cupressus Lawsoniana* (seedling form); 4, *Abies pectinata*; 5, *Cupressus Lawsoniana*; 6, *Retinospora pisifera*. G. T. W.—*Desfontainia spinosa*.—E. O.—*Convolvulus minor*.

**Names of fruit.**—J. C. Tallack.—Peach, Hogg.

# THE GARDEN.

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## FERNS.

### RESTING FERNS.

There are many Ferns which, though not deciduous, are much better kept quite cool and dormant during the winter. I have found in several instances that those kept in a warm drying temperature will continue to make fronds throughout the autumn, but when spring comes they have exhausted all their strength, and cannot make the vigorous spring growth which is natural to them. In some cases I have found that giving too much warmth during the autumn and winter has proved fatal. I may mention *Pteris scaberula* as an instance. Although this beautiful Fern will make better growth by giving a little extra warmth during the spring when it is natural for it to be in a state of active growth, it is almost certain death to keep it in a warm house after it has completed its season's growth. When good plants of the varieties of *P. serrulata* and *P. cretica* are required for early spring it is better to select plants with strong crowns and keep them dormant until, say, February, and then if given a good start in heat they will soon overtake those that have been growing throughout the winter. Of course this does not apply to young seedlings; these must always be kept going until they have made good crowns. Gleichens are another class which it is absolutely necessary to keep cool during the winter. I like to avoid frost, though they will stand a few degrees. There is perhaps no other class of Ferns which baffles the ordinary cultivator more than these. They love a cool, moist atmosphere with plenty of light and air above. In many instances it is difficult to provide this during the summer, as to give them sufficient light means to expose them to the sun. An old-fashioned, deep brick pit, where the lights can be tilted so as to let in light and air and at the same time exclude the direct rays of the sun, suits them well, or, better still, a lean-to house with a northern aspect.

Many of the *Adiantums* which are required for spring use will be better if partly dried off and kept just above freezing point. If the roots are kept healthy, they will start away vigorously if given warmth early in the year. All the old fronds should be removed previous to starting them, and it is necessary to be careful with regard to watering until they have begun to grow. *Cyrtomium falcatum*, one of our most useful Ferns for decoration, will continue to grow throughout the winter, but those with strong crowns, if rested during the winter, will, when started in warmth, throw up strong fronds, and soon make well furnished plants. *Lomaria gibba*, although naturally evergreen, may be dried off early in the autumn, that is provided the plants are well established and have strong crowns. The roots must be in good order, and while they are kept cool the crowns must be quite dry. With good treatment they soon make well furnished plants when started early in the year.

With all Ferns in a dormant state it is essential to avoid wetting the crowns, and to keep them sufficiently moist at the roots to prevent shrivelling. I believe our British Ferns would be much more popular if those who attempt their culture would study their natural requirements. When grown in pots they often continue to grow late in the autumn, and are sure to suffer more or less if we get frosty weather. Generally when growing in their natural habitats they are not only protected by their own old fronds, but other leaves, &c., help to cover and protect them, and this is one important point which many who attempt their culture quite overlook.

### DECIDUOUS FERNS.

Now that these will be losing their fronds, care should be taken that they do not get consigned to the rubbish heap. I have known more than one case where this has happened, therefore a warning may not be out of place. Of *Adiantums* which are quite deciduous, the

beautiful *A. palmatum* is one, also *A. speciosum*, *A. Henslowianum*, *A. amabile*, and *A. lunulatum*. *Nephrolepis pluma* and its variety *Bausei* are very beautiful during the summer, but lose all their fronds about this time, and are liable to get lost altogether if not carefully treated. They should be kept in a moderately warm position, and must not be allowed to get too dry, or the roots will perish.

Of *Davallias*, *D. Bullata* and *Mariesi* are both deciduous, but if kept in warmth the latter will start into new growth almost before the old fronds are off. *Leucostegia immersa*, which makes such a beautiful basket Fern, may also be referred to. This may be kept rather on the dry side while dormant, but not too much so. *Lastrea erythrorosa* and *L. Richardsi multifida*, both very desirable Ferns, should be kept quite cool and fairly moist, and may be started in warmth early in the year. *Athyrium Goringianum pictum*, the hardy tricolor Fern, requires similar treatment. *Struthiopteris germanica* and many of the beautiful North American Ferns are deciduous; the latter include the beautiful *Adiantum pedatum*, *Oncoclea sensibilis*, several *Osmundas*, *Lastreas*, &c., besides many of our beautiful English Ferns, which, though quite hardy, are better with the protection of a pit, for if we get mild weather they start prematurely, and then the frost cuts off the young fronds, and the plants will be disfigured for the season. By keeping them as cool as possible during the autumn and fairly moist, and then starting them in a gentle heat early in the year, they make fine plants early in the season. A. H.

**Aralia Sieboldi in flower in Ireland.**—At the close of November, when the branches of the trees that have borne aloft their leafy banners through all the sunlit hours of summer's golden prime lie in dark tracery against the evening sky, we turn with joy to these blossoms that are expanding. To-day the *Aralias* are exquisite. They are growing in the shade of Laurels, they are growing on a sunny bank, but alike in each position are sending up their branching spikes of silvery bloom. Resembling as they do the flowers of Ivy in their rounded growth, they are etherealised by their pallor,

To what may one liken them? They are as white blossoms seen in the moonlight, as stary nebulae set in their own dark shining leaves. These plants, put out five years ago, have been growing in the open ground ever since without any protection save that afforded by overhanging boughs. One plant, older than the others, has now attained a height of almost 7 feet, and measures through the centre 8 feet.—A. L. L.

## CHRYSANTHEMUMS.

### MARKET CHRYSANTHEMUMS.

A FLORIST in this neighbourhood recently remarked that he had no need to buy Chrysanthemums just then; he could get as many as he wanted in Covent Garden for nothing. This remark was made not jestingly, but in sober earnest, and I was assured that in the beginning of the month the amount of bloom brought into the London market was so great, that thousands of bunches remained unsold, and were offered to anyone who chose to clear them off. As a friend who grows for market observed "How can you expect to sell indoor Chrysanthemums when fields and gardens everywhere are full of them?" People seem to be growing the hardy outdoor kinds more freely than a few years ago, and the number cultivated for market has increased wonderfully. The frost we had in October, although it killed the buds of indoor varieties that were still in the open, had little or no effect on the hardy ones that are employed for open-air blooming. Since then the genial summer-like weather has developed the blooms, and probably not more than twice in twenty years do we get the tall-flowering Chrysanthemums in such abundance and perfection. A few days since I was looking through a lot of well-grown plants in pots, mostly late varieties, and was surprised to see how forward they were. Niveum was fully expanded quite a month before its time, and W. H. Lincoln would be in full bloom by the end of November. The grower is naturally by no means pleased at this precocity, as blooms that ought to have been in good condition at Christmas and the new year will have to be marketed several weeks earlier. The plants are grown in bush form for the production of from eighteen to twenty-four good-sized flowers, which in midwinter make from 1s. to 2s. 6d. per dozen, but, being so early, I am doubtful if they will make half that amount. Had the sharp touch of frost not occurred in October, the plants could have remained in the open for another fortnight, and this would have made all the difference. We have to reckon with about 10° of frost one night towards the end of that month, and the right way in the case of plants that are required for midwinter bloom is to devise some form of protection that will guard the plants against its effects. The frost we had was just enough to cripple the buds on plants not protected, but a screen of canvas was enough to ensure their safety. It was curious, however, that neither wood nor foliage was in the least affected, and when plants that were unprotected were housed they began to push out fresh buds from the axils of the leaves, so that we shall probably after all have a good supply of very late Chrysanthemums, for these buds cannot open before January, the danger being that many of them will not open at all. Good yellow Chrysanthemums are in brisk demand through January and in the beginning of February, prices going up considerably after the middle of January, but this is not always the case with white ones, which frequently decline in value as February ap-

proaches, the reason, I suppose, being that white Azaleas, Spiræas, Hyacinths, &c., are plentiful then, whereas yellow flowers, that can be forced and are suitable for cutting, are comparatively scarce. It would, I think, be possible to sell a waggon-load of yellow Chrysanthemums at the close of January at good prices; in fact, yellow and bronze seem most in favour still for room and table decoration, as they show up so well by artificial light. As regards late white Chrysanthemums, we have not yet got one that can be said to realise the market grower's ideal. Lady Lawrence, L. Canning, and Mrs. Camell are late enough, but need good culture to make them profitable. They are not suitable to the cultural methods pursued on such a large scale in the London market gardens. Niveum is much better, but it seems to be more a late December than a mid-January kind, and I am told that the blooms do not keep so well as could be desired.

To those engaged in raising new varieties I would suggest crossing the old Ethel with the above-mentioned kinds. Ethel is everything a late Chrysanthemum should be except in quality of flowers. It shows an eye, or would never have been discarded. If with the habit of this variety we could get the flower of Lady Lawrence, we should have nothing more to desire in the way of late white Chrysanthemums. Late varieties generally are very liable to mildew, and from this pest Ethel was with me, at least—quite free. Of mid-season whites, Souvenir de Petite Amie is one of the most useful, it is so dwarf, yet vigorous; and the new Mytchett White will, I think, come to the front. For December Lord Brooke is very good, flowering in great profusion, and those grand yellows, Western King and Modesto, should get a good trial.

J. C. B.

**Reflexed Chrysanthemums.**—It is becoming more evident each season that the reflexed Chrysanthemums are a declining class. The limited competition points to the fact that the interest in this form of the flower is on the wane. At most shows one class is provided for these flowers and generally three prizes offered. There are never more than two competitors, and at the November exhibition of the National Chrysanthemum Society, out of all their members no more than two competitors staged exhibits in the class for twelve large-flowered reflexed blooms in not less than nine varieties. In trying to find a reason for this decline one cannot very well come to any other conclusion than that, owing probably to the lack of novelty and variety in this type of the flower, and the somewhat stiff and formal character of many of the older sorts, they fail to please the majority when contrasted with the varied character of the Japanese varieties. There are some very pretty sorts among them, the brilliancy of the colouring of Cullingferdi, for instance, in well-developed blooms, standing out distinctly from that of almost all other Chrysanthemums.—D. B.

**The old purple Chrysanthemum.**—I have often wondered whether the purple-flowered variety so common in gardens as a hardy herbaceous perennial was the old purple, and a white-flowered form, practically a reproduction in habit and form of flower, also plentiful, was the first sport. I have seen these varieties, the purple especially, largely grown in forecourt gardens about Kingston. I have seen it also very abundant elsewhere. It would be very interesting could some society, such as the Royal Horticultural Society, for instance, succeed in gathering up plants of all these old forms and grow them along with the best representatives of the Chrysanthemum of to-day. I do not know how long the Christines have been in commerce, but these are probably very old. It is, however, certain that if the old purple and its original sport to white be those I

have mentioned in the larger pompon section, such great progress has been made, as the varieties have flowers as good, comparatively, those of Mme. Marthe, for instance, still a capi pompon. It is remarkable how these old varieties in the forecourt gardens named go on growing and blooming from year to year with surprising energy and vigour.—A. D.

### CHRYSANTHEMUMS AT EARLSWOOD

MR. W. WELLS, of the Earlswood Nursery Redhill, has several houses full of Chrysanthemums in bloom, the largest of which is a span-roofed structure about 160 feet in length by 22 in width. The blooms are very fine, and afford abundant evidence of the greatest possible skill in their cultivation.

The varieties are in the main novelties of recent introduction and principally of the Japan type, although a few of the other sections are represented. American, home-grown, French, Italian and some colonial novelties make up the display, but by far the largest number, of course come from the other side of the Channel, and these, the well-known grower and raiser, M. Er Calvat, is a very large contributor. Mr. W. enthusiastically declares that it is quite impossible to bestow upon this successful raiser much praise for the way in which he has improved the Chrysanthemum during the past few years. In this expression of opinion everybody who has watched the eminent Frenchman's progress must concur, and from what we saw on the Continent last year we feel confident in predicting that there is even now more to expect from the Calvat race than some people might think.

The collection is arranged with a double-sloping bank of plants down the middle of the greenhouse and a row of dwarf plants round the sides, and the number thus employed must be considerable. All shades of colour in the pompon flower are to be found, but the whites and yellows are perhaps more uniformly good than some of the higher tones. In varieties belonging to the Japanese section sent out by M. Calvat, the following must be considered as of the highest order of merit, and grandly maintain the raiser's reputation, viz., Directeur Liebert, a very fine globe bloom having grooved and curly florets large size, and of a deep lilac-mauve colour. N. Jubilee is simply a grand addition; it is so compact, and finely incurved with grooved florets colour silver pink, reverse inside, florets lavender pink. Mme. Ferlat is a noble new white, compact and massive, with grooved incurving florets pearly white. Mlle. Laurence Zédé is another large compact variety, with grooved pointed florets of medium width, colour inside yellow amaranth, silvery pink reverse. M. Massang Louvrex is a fine new yellow. Souvenir de F. sette is an incurving bloom with pointed florets colour plum coloured amaranth, with silvery amaranth reverse. Mme. X. Rey Jouvin is a pretty incurving bloom with broad grooved florets rather blunt at the tips, of good size, and in colour a charming shade of deep rosy pink, and slightly hairy at the tips. Werther is a rich purple amaranth; Surpasse Amiral, a large new yellow; Souvenir de Molines, crimson bronze tipped, reverse of gold; Princesse de Galles, very large white, with great length of floret; Comte de Bourges, deep purple curly incurving floret. One of the greatest novelties, and one which when well distributed will be certain to excite some curiosity from the outside public, is M. Ed. Roger, a pale sea-green incurved Japan. Mme. A. Rousseau, Mme. G. Bruant, Isère, Mlle. Lucie Faure (a large fine white), Vicomte Roger de Chezelles, Topaze Orientale (a fine yellow), Mme. Deis (white), Fée de Champsour (white florets), are all this year's novelties from Calvat. But if the novelties are a source of interest, what can we say concerning some of the older and well-tried sorts already in general cultivation? Some magnificent examples of Chenon de Leché, M. Hoste, Mme. Carnot, M. André, M. Pankoucke, Capt. L. Chauré,

Perfection, Louise, Admiral Avellan, Antoinette, Mrs. J. Lewis, one of the grandest whites in the display, Mlle. M. A. de Gialbert, Calvat's Australian Gold, Le Mouchebotte, Mlle. Thérèse Rey, Boule d'Or, and probably a hundred others, all equally good, attest the overwhelming supremacy of the Calvat seedlings. Some years ago several Italian growers sent over new varieties to this country, but they seemed to be unable to compete with the French, and nothing much has been seen until last season of novelties from that country. Mr. Wells has, however, a few new ones, viz., Louis Sirtori, Piémont, and Count Cavour, raised by the gardener to H.M. the King of Italy, who will be remembered, exhibited at the National Chrysanthemum Society's Jubilee show last year. We were gratified to see, among other Continental novelties, several from our old friend, M. de Leydellet, Mlle. Lucie Mathieu de la Drome, an old-fashioned incurved and of a fine shade of pale golden yellow, being one of the best. The same raiser is represented by M. Haguer, pale rosy mauve, Japanese incurved, large in size and having a silvery pink reverse. Mme. Desblanc is another of the same type, the florets of which are grooved, twisted and intermingling, and the colour a pretty shade of bright pink. Don Pietro Baragiola, a golden yellow, shaded carmine, is another, very effective and striking.

English novelties well represented are the white Mrs. C. Blik, Lady Hanham, a very pretty almon and rose-coloured sport from Viviani Morel; G. F. Warren, a grand full-sized pale yellow sport from Mme. Carnot; Royal Standard, dark crimson and gold; Royal Sovereign, golden yellow; Mrs. D. Dewar, white; Pride of Maidenhead, white; Mrs. H. Weeks, Edith Tabor, yellow, &c.

Miscellaneous novelties in the Japanese are to be found in three sports from Mrs. C. Harman-Payne, viz., Mrs. G. W. Valmer, Mme. Eugène Testout and Mme. Louis Remy. The two first-named are rosy bronze, and are probably identical, one having originated in France and the other in England, the third is distinct and pure white in colour. Parachute is old rose, shaded carmine and almon, very pretty. There is a goodly number of unnamed Australian seedlings, and of colonials that are already in favour here, Pride of Madford, Australia and Oceana need only the briefest mention. Mme. Ph. Rivoire is a large white Japanese; Ella Curtis, a deep golden yellow, dusted carmine; Georgiana Piteher is very fine, large and heavily built, and of a pale canary-yellow. A new hairy variety is Maurice Boissard, pale golden yellow. Mrs. C. B. Freeman, a sport from Louis Brehmer; Floire Lyonnaise, Capt. L. Chauré, bronze-yellow, and M. Alfd. Thierrard, salmon-gold, are new additions to this class.

American novelties comprise some really choice varieties, although they are not nowadays quite so numerous as they were. Sunstone, rather tall, with globular, incurving blooms, and of a beautiful shade of apricot or golden ochre-yellow, is perhaps not so well known as Modesto, deep golden yellow. Lenawee (white, faintly tinted blush, long loose florets) and Mutual Friend (large white), also come from the other side of the Atlantic. Snowdon (large white) and Simplicity (very long white florets) are two more; Western King (white) is another.

In one of the houses there was a capital collection of single-flowered varieties coming on. Many of these are light in build and very useful for decoration, vases and artistic combinations. Parity, a large white, was large in size; Miss Lary Anderson (white, tinted blush) and Miss A. Holden (a yellow counterpart) were very pretty. Lizzie Mainwaring (very pretty pale blush) is worthy of a note, but one of the deepest and richest is the Rev. W. E. Remfrey, a deeply plumed, velvety dark amaranth. Then Virgin Queen, a pure white single Japanese, attracts attention; Emily Wells (rose-pink), Edwin Veller (large in size, with long florets, colour olden buff), and Rose Pink (a variety whose name is sufficiently descriptive, but shaded white to the base of the florets) forms an excellent com-

panion. In Annie Tweed the blooms are of a deep rich velvety crimson, but have broad flat florets. Gus Harris (an old variety, very pretty, but small) and Buttercup (pale lemon-yellow) both help to brighten up the group.

#### CHRYSANTHEMUMS AT FRAMFIELD.

At The Vineries, Framfield, Sussex, Mr. Norman Davis grows some 30,000 plants. A very effective method of arranging the plants has been carried out here. Most of the plants of a sort are grouped together, impressing one with their respective value and their usefulness for various purposes. Rich and striking contrasts are by these means easily effected, and the value of a sort for its form or colour, &c., is immediately made apparent. There are eight large houses, one alone covering half an acre, and six of these are filled with exhibition blooms and those plants intended for market. In the first house, some 200 feet long, a fine lot of Modesto with its large and handsome Japanese flowers of the deepest and richest shade of golden yellow made a fine display, and convinced one of its value as an exhibition sort; close by and making an effective contrast was a grand lot of Australian Gold with massive heads of bloom. The colour was a pale straw-yellow, deepening to the centre. Mrs. H. Weeks, so highly thought of two years ago, was represented by flowers of immense size and substance, the broad florets prettily incurved. Pearly white is the best description of its colour this season. A new American Japanese incurved and in promising form is Mrs. J. J. Glessner, with broad petals of golden yellow-tinted apricot. This was grown in a very free manner, and doubtless when freely disbudded will make an invaluable exhibition flower. M. B. Spaulding, introduced some years ago, is a pale canary yellow, with long twisting and curling petals, making a large flower, and promises to make a useful addition to these colours. The light chestnut blooms of Mrs. Hermann Kloss were represented in many stages of development, and proved that when the right bud is selected its rich golden tint assists to make it a distinct gain to the exhibition sorts. Plants of Louise, each carrying a dozen flowers of beautiful incurved form and a lovely pale flesh-pink tint of colouring, pronounced it as a good decorative sort as well as one for the exhibition table. Miss Elsie Teichmann was rather later than most others, yet its pearly white blossoms were very refined. By far the largest bloom of Hairy Wonder we have seen was here. One peculiarity was its regular colouring of deep fawn throughout, stamping it as the best of the hairy-petalled varieties. Of the beautiful ivory-white Lady Byron there was a fine lot of plants, each carrying large flowers of grand substance. This sort is evidently easy to grow. Madeline Davis is a seedling raised this year, and undoubtedly a flower of the most chaste description. It is best described as silvery white, tinged throughout with rosy violet, this colouring deepening at the edges. The shape is somewhat like Phœbus, with longer and rather broader florets and more tapered. Remarkably fine were the flowers of Miss Dorothea Shea. The most handsome display was made by between 200 and 300 blooms of Mme. Carnot in two rows on either side of the house, and produced on plants taken on the third run, *i.e.*, the second crown bud. Mr. Davis has used 8-inch pots for these plants, which are quite 10 feet in height, and one and all the blooms are fit for the exhibition table. This feature of the display is in itself quite unique. A charming new incurved Japanese was seen in Mrs. S. C. Probyn, this being a very neat and even flower of easy culture, with broad incurving florets of great substance, and possessing a nice habit. The colour is a beautiful flesh-pink. Belle of Castlewood is another large incurved Japanese of a faint flesh colour, with long broad incurving and curling florets, one of this season's American introduction. Simplicity is no doubt a chaste white flower, and makes a bloom of graceful

appearance when fully developed. Mrs. F. A. Bevan is another incurved Japanese, of refined appearance and a pleasing shade of flesh-pink, with a paler reverse to the florets, of medium width. Klondike, the new rich yellow early decorative Japanese, is a decided acquisition to the early sorts. Mrs. A. H. Wood, the deep yellow sport from Primrose League, is in better form than in other seasons, and promises to make an immense spreading flower of good depth and lovely form. Western King is another of the very best things here, its pure snow-white incurved Japanese blossoms of grand substance looking very fine as the lower florets begin to droop. This is essentially an exhibition flower, its size being all that is desired, while as a decorative sort it may be grown quite freely with the best results. The new rosy-bronze sport from Mrs. C. Harman-Payne, Mr. G. W. Palmer, was in capital form, the colour being very bright. As a flower it is distinctly superior to the parent. M. Ernest Calvat's novelties are much better this year than formerly, the majority of the sorts being of high quality. The most striking of the set is Beauté Grenobloise, a large ivory white, with long florets twisting and incurving at the tips, fairly dwarf habit; Souvenir de Mme. F. Rosette, carmine-purple, with silvery reverse, is of sturdy habit; Fée du Champour is a clear white of good substance and very chaste; Mme. G. Bruant, a large flower with broad pointed florets, is white, centre striped and flushed pale rosy lilac; Secrétaire Fierens, something like John Seward, has long florets, colour reddish crimson, and golden reverse; President Nonin, somewhat in the way of Sunstone, has prettily incurving florets of good substance, colour chamois-yellow; N.C.S. Jubilee is a dense flower with short florets, colour silvery mauve; and Mlle. Laurence Zédé, an immense rosy purple, with silvery-lilac reverse. Such sorts as Dorothy Seward, John Neville, Phœbus, M. Chas. Molin, Mlle. T. Rey, Viviani Morel, and its sports maintain their high reputation as exhibition flowers.

Incurved varieties are grown in large numbers, though more for the purpose of keeping stock together than for producing high-class flowers, and these, together with the market sorts, make up a display of exceptional merit.

#### CHRYSANTHEMUMS AT DOVER HOUSE, ROEHAMPTON.

For some years past there has been a remarkably fine display annually made of the Chrysanthemum in these gardens. During a recent inspection I was gratified to find such a representative collection, for not only are the large-flowered varieties, both Japanese and incurved, grown extensively, but the smaller or decorative varieties also find much favour for every-day cutting in large quantities. The plants throughout are remarkable for healthy development, with short-jointed, sturdy growth, healthy, dark-coloured foliage of good substance and free from mildew in a notable degree. Both cut-backs and taller plants find a place in this collection, which also, by a process of annual selection, contains only the very best kinds as regards colours, good constitution and general reliability. The plants when seen were most effectively grouped in the range of vineries and Peach houses, which are by reason of their loftiness well calculated to display every plant to the best possible advantage. I noted that Mr. McLeod had carefully guarded against an overcrowded condition; each plant stood so as to allow of a free circulation of air amongst the foliage. This is as it should be, for if the foliage be not preserved in a healthy state, how can one reasonably expect the flowers to be perfectly developed? It was noted that a slight amount of shading was given, as the foliage of the fruit trees was all cleared off, or nearly so; thus any undue rise of the thermometer was avoided, and thereby the plants preserved from any undue strain upon their resources. In a conversation with Mr. McLeod I soon ascertained that he is no believer in the dressing system so much in vogue with exhibitors.

It is worth their while that others also who grow the Chrysanthemum well should take note of this and abstain from this ridiculous waste of time in altering the character of their flowers (dressing being oftentimes termed "building up," as if it were a mechanical process). Of course in an exhibition, if no dressing is practised, the exhibitor stages at a great disadvantage to himself, but it had better be so, I am disposed to think.

The following varieties were noted as of special excellence at the time of my visit, amongst which will be found a few of the best novelties, viz.: Edith Tabor, very rich in colour; Chas. Davis, large and fine; Lord Brooke, earlier than usual; Baron Hirsch, Miss Haggis, Vice-President Calvat, and Oceana, both extra fine in the petals; Lady Saunders, a beautiful primrose; Mlle. Marie Hoste, C. H. Curtis, specially good; and Major Bonafion, which is too much like it. Col. W. B. Smith, Louise, Lord Wolsley, G. C. Schwabe, Mutual Friend, a beautiful white; John Seward, yellow, extra; Egyptian and Surprise, two good dark colours; John Myers, distinct and fine; Mrs. Geo. Palmer, a sport from Harman-Payne; Vivian Morel, E. G. Whittle, flesh colour, distinct; Mrs. C. H. Payne; Abbé Mendenthal, extra, yellow; Eva Knowles, M. Gruyer, Etoile de Lyon, Pride of Madford, fine dark; Duke of Wellington, bronze; Mrs. S. C. Probyn, blush-pink; Mme. Thérèse Rey and Mrs. Bhek, two fine whites still worth every attention bestowed upon them, were also excellent.

VISITOR.

#### SHORT NOTES.—CHRYSANTHEMUMS.

**Chrysanthemum Earlswood Beauty.**—This is a single variety of most attractive shape. It is pure white, the florets of extra length, so that the blossoms are larger than many of the class. The disc is prominent, which gives the flower a distinct feature. This variety appears to me much the best single Chrysanthemum of its colour.—H.

**Chrysanthemum Mme. Ferlat** is a new sort, the blooms of which incurve regularly, and it is likely to prove a capital addition to that class. The pure white flowers are quite 6 inches across and of proportionate depth. It is dwarf and easy to grow. This being the case, there is little doubt that it will replace such old favourites as Empress of India, now so seldom seen in good form.—S.

**Chrysanthemum yellow Mme. Carnot**—The bloom picked out at the Aquarium show as being the best single specimen exhibited was a very fine one, of a light shade of colour. It originated, I believe, with Mr. Mease, the exhibitor, and seems paler in tint than G. J. Warren, the yellow sport more generally distributed. Perhaps the latter will prove the better when by an early start one can obtain strong plants. It had been propagated too freely to give the best results this year.—H.

## TREES AND SHRUBS.

### THE RED CEDAR.

(*JUNIPERUS VIRGINIANA.*)

COMMON from Nova Scotia to Southern Florida and Central Texas, and from the shores of the Atlantic to the valley of the Missouri River, the Red Cedar assumes many forms under various conditions. In the valley of the Red River, in Texas and Arkansas, it is sometimes 100 feet high, with a tall straight trunk 3 feet or 4 feet in diameter; usually it is much smaller, however, and generally 40 feet or 50 feet in height. Sometimes, especially during its early years, the slender branches are pressed close against the stem from the base upward and form a narrow pyramidal head, which in time usually broadens out and finally becomes round-topped and irregular. This pyramidal form is especially common in the valley of the Hudson River, and in some parts of New Jersey and Eastern Pennsylvania. In New England, after the first twenty or thirty years, when the Red Cedar is nearly always pyramidal, the stems often become naked below and the head a broad-based pyramid of slender

branches spreading below nearly horizontally and ascending above; and in the swamps of Florida, where this tree is common and grows to a large size, the branches are long and often pendulous. The foliage of the Red Cedar is dark yellow-green, or often pale glaucous, becoming bronze-coloured at the north during cold weather, and in autumn and winter, when birds do not eat them, the branches are loaded with the small berries, which are covered with a whitish bloom.

*JUNIPERUS VIRGINIANA* has usually been considered to cross the continent to the shores of Puget Sound and Vancouver Island, and to be pretty widely distributed through the interior Rocky Mountain region from the northern border of the United States to Northern New Mexico and Arizona. Having seen a good deal of this western tree, I am inclined to believe that the so-called western Red Cedar as it grows in Wyoming, Montana and Colorado, at least, and perhaps everywhere, will have to be considered another species, and should this supposition prove correct on further investigation, I should propose the name of *Juniperus seopulorum* for it. The habit of the Rocky Mountain tree is very unlike that of any form of the eastern Red Cedar. It has the slender branchlets and opposite leaves in pairs of the eastern tree, but the fruit is larger, and does not ripen until the second year, while that of our Red Cedar ripens during its first autumn. The branches are stouter and covered with more scaly bark, and the bark of the trunk, which is often forked near the ground, is unlike that of the eastern tree, which separates into thin, narrow scales fringed on the margins, but, like that of some other western Junipers, divides into irregular, narrow, connected flat ridges, which break up on the surface more or less freely into persistent shreddy scales. The wood has the same fragrance as that of the eastern tree, although it is rather less powerful, and the colour is a duller red. The habit and the character of the bark may be due, perhaps, to differences of soil and climate, which might also affect the colour of the wood, and the only really tangible character by which the western tree can be separated from the eastern is the biennial fruit. Before the question of the distribution of the Red Cedar can be satisfactorily determined, more observations should be made on the time of ripening of the fruit, especially in Colorado, Utah, New Mexico, and Arizona, in the valley of the Columbia River and on Vancouver Island, for it is, of course, possible that the proposed *Juniperus seopulorum* may be confined to the Northern Rocky Mountains, and that *Juniperus virginiana* really reaches the southern part of that range and even the Pacific coast. The Red Cedar, although usually regarded as a slow-growing plant, increases rapidly with generous treatment; it is easily transplanted while young, and with care plants 10 feet or 12 feet high can be safely transplanted, although an idea prevails in this country that the Red Cedar is difficult to move and unsuited for cultivation.

*JUNIPERUS CHINENSIS*, which is occasionally found in our gardens and is perfectly hardy as far north as Eastern Massachusetts, is in every way inferior as an ornamental plant to the native Red Cedar, which it somewhat resembles, and at the end of a few years usually becomes ragged and shabby in appearance. *Juniperus chinensis* is widely distributed in Eastern Asia, from the borders of Thibet to Japan, where it does not appear to be generally scattered, although it is common on the high volcanic ridges at the base of Asama-yama, in Central Hondo; here it becomes a shrubby tree 30 feet or 40 feet high, with straggling contorted branches and grey-green leaves. Two venerable and picturesque specimens, 70 feet or 80 feet high, with hollow trunks some 6 feet in diameter, before the temple of Zenkogi, in Nagano, show that this Juniper sometimes attains a large size. Another form, usually known in gardens as

*J. JAPONICA*, is in early life a compact bushy plant with many erect branches and acicular blue-green leaves. This shrub is perfectly hardy and

very distinct in appearance from other Juniper retaining for several years its peculiar compact juvenile habit, it too often becomes thin and ragged before it is 12 feet high and loses its value as an ornamental plant. This is, perhaps, one of the most difficult of all conifers to transplant. Many recent authors the so-called Juniper japonica, which does not appear to be known in wild state, has been confounded with the prostrate littoral Juniper of Japan and Corea (*Juniperus procumbens*, Siebold—*Juniperus chinensis procumbens*, Endlicher), now usually considered a variety of *Juniperus chinensis*, although perhaps it will, when better known, be found distinct enough to be given a specific position. This shore plant forms dense mats on low glassy blue fully exposed to ocean gales, sending out for long distances its prostrate creeping stems clothed with bright green scale-like leaves. From sea gathered near the Aino village of Horobetsu, the coast of Yezo, a number of plants have been raised in the Arnold Arboretum, but it is too soon to speak of their hardiness. Another prostrate Juniper,

*J. SABINA VAR. PROCUMBENS*, is an excellent garden plant with wide-spreading stems which hug the ground and are clothed with bright green foliage. This is now usually considered an American variety of *Juniperus Sabina*, which an erect shrub or small bushy tree, occasionally 12 feet or 15 feet tall, and is widely scattered through Central and Southern Europe and Siberia. If it has ever been properly tried in our garden it has probably not proved hardy. The American plant is distributed from Southern Maine to the shores of Hudson Bay, and westward in British America from Newfoundland to the Rocky Mountains of Southern Alberta, and through Northern New England and New York along the shores of the Great Lakes to Northern Minnesota and over the mountain ranges as far as the eastern slopes of the Rocky Mountains in Montana. This is the hardiest and most beautiful of all the prostrate Junipers which can be grown in our gardens, where it might well be seen much more frequently than it is. The prostrate form of

The Himalayan *J. recurva VAR. SCAMATA* a favourite garden plant in Europe, and has frequently been planted in this country. In Massachusetts it is not very hardy, although it can usually be made to grow in sheltered, shady positions; in New York and southward it is, however, perfectly hardy. *Juniperus recurva*, which is widely distributed from Afghanistan to Sikkim and Bhota is sometimes tree-like, but at high elevations remains shrubby and covers large areas with low decumbent stems running on or just below the surface of the ground and sending up numerous short, erect branches.—*Garden and Forest.*

**Populus trichocarpa** (Torrey and Gray). This is a handsome species of Poplar, native of British Columbia, and introduced into Europe for the first time in the year 1889 to the arboretum of Zoschen, near Hersebourg, in Germany, which Dr. Diek is the director. It is only three or four years since its culture commenced in France, where it was put into commerce, in the year 1893, by MM. Simon Louis frères, of Metz who had obtained specimens of it from M. Lou Spath, of Berlin. Now all our leading nurseries grow it. This new species (or, more properly speaking, one that was only recently introduced amongst our cultivated plants) is distinct from the species and varieties hitherto grown by us, and if we might compare it with any of these, we would say that it somewhat resembles the Balsam Poplar (*P. balsamea*), from which, however, it differs very appreciably. In vigour of growth it appears to surpass such vigorous-growing kinds as the Swiss Poplar, the Italian Poplar, the Improved Poplar, &c. *Populus trichocarpa*, moreover, appears to adapt itself to all kinds of soil and has the great advantage of not being liable to become diseased, as sometimes happens in the case of the other species and varieties.—*J. Fossing in Le Jardin.*

FLOWER GARDEN.

MESEMBRYANTHEMUM ROSEUM.

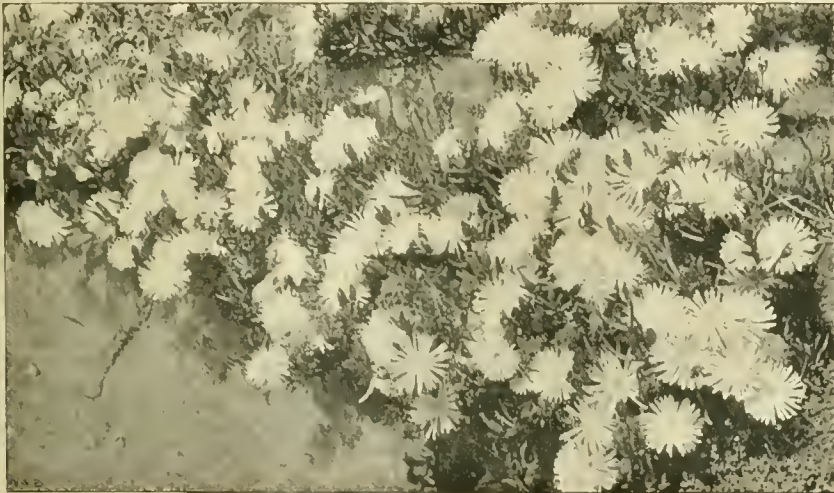
The Mesembryanthemum in the illustration is given to me under the doubtful name of M. roseum. I first saw it at Madeira, where its light rose-crimson flowers hung down from any a mirante just as the Carnations do from the balconies in Spain. It is a charming plant for English gardens, and has a preference for the sea-side, where its growth is more compact and its flowers most abundant. It is the only one of its race I have found hardy enough to live out during a mild winter on the north-west coast of England, and it makes such an effect of colour the second summer that friends who are familiar with the big Mesembryanthemum pomeridianum, so abundant on the shores of the Mediterranean, have been surprised into thinking it the same plant. In reality it is, however, a much better thing, flowering continuously for six months at least, while the big species hardly lasts six weeks. There is also a pure white form of M. roseum which is even more lovely in some folks' eyes than the type, and makes an excellent groundwork to a dark crimson like Jacoby when thinly planted.

although much paler in colour. Heliotropes are full of flower, and many annuals have lately made quite a fresh start into growth and flower. Beds of Mignonette that had got quite a seedy look in September are now covered with a fresh growth of flower-heads. Corocopsis tinctoria, Sweet Sultan, white and purple, Chrysanthemums and many others too numerous to mention are flowering freely. Open-air Chrysanthemums have not for many years had such a fine flowering time, even the very latest kinds that we never attempt to bloom (except under glass), look like finishing their season without any protection. L. Canning, Niveum, Princess Victoria and other white varieties that are spoilt with even a few degrees of frost are flowering splendidly, and growers with a quantity of these on hand for the Christmas market are at their wit's end to keep them back. Gloire de Dijon Rose keeps flowering as freely as in June, and some of the varieties like Souvenir de la Malmaison are really good in form and colour. I must not omit to mention how useful the white and yellow Marguerites are, I think the blooms are individually much finer than they were in their usual open-air season.—JAMES GROOM, Gosport.

**Cactus Dahlias.**—In reply to W. E. Endicott (page 401), the following I consider the best: Alfred Vasey, salmon-rose; Beatrice, rose-pink; Bertha Mawley, cochineal colour;

desire to say a word or two. This is C. lavigatus, from the Cyclades and the Greek mountains. It has been in flower here since the end of October, and, although suffering from the recent stormy weather, is likely to give blooms for some little time to come. It is a pretty little species, perhaps all the more pleasing on account of its flowers appearing before its leaves, which come in autumn, have withered away. It is rather variable in colouring, and some more or less defined markings and shades have been selected by bulb growers. The segments vary from white to lilac, and the diversity is added to by the difference in the feathering or suffusion with purple of the outside of the outer segments. The anthers are white, and the stigmata yellow or orange. The flowers are, like those of nearly all the species, considerably inferior in size to those of the Dutch Crocuses, but have, by way of compensation, a neatness and simple beauty which make them more pleasing in the eyes of many. One merit of C. lavigatus is the comparatively little sun it requires to persuade it to open. If the flowers can be kept dry they expand more readily, but many do not care to see glass protectors in their gardens. This Crocus is too choice to be grown in the border until it becomes more plentiful, and a sunny, sheltered place in the rock garden is what it should have.

S. ARNOTT.



Mesembryanthemum roseum in a Scarborough garden. From a photograph sent by Mr. E. H. Woodall, St. Nicholas House, Scarborough.

POLYGONUM SPHEROSTACHYUM AND ASTER DIPLOSTEPHIODES.

ONE is disposed to agree with the remark of Rev. C. Wolley-Dod that P. spherostachyum "will not yet be a common plant, even if it is destined ever to be so." The latter part of the sentence quoted implies a doubt with which one is especially inclined to express agreement. It is not a good sign of the amenability of a flower to cultivation when it rises considerably in price instead of becoming cheaper. A temporary increase in value may arise from an unexpected demand, but one finds, as a rule, that a plant which advances in price some time after introduction is either difficult to propagate or unsatisfactory in some other way. This appears to be the case with this Knotweed, although, as has been said, every one of the flowers on the spike is a possible plant. It is rather a favourite flower with me, but a good many opportunities of observing its behaviour in gardens have given me cause for disappointment. Mr. Wolley-Dod is more successful than many in retaining his plants for ten years, as this is a feat reserved for comparatively few. Grown in a half-shady position in peat soil in this garden it is not very long-lived, and one has to depend mostly upon self-sown seedlings to keep up the stock. These are not plentiful, but come up among a patch of Sedum acre which covers the nook in which Polygonum spherostachyum grows. In nine out of ten gardens in which one has seen it attempted it is a complete failure in a year or two. In a few it, however, succeeds, and in some of these it has been grown with more sun than one has been disposed to think that it requires. Perhaps we may have erred in thinking that it needs so little sun in this climate. Its neat habit and bright colouring are strong recommendations, and the former quality is one in which it has an advantage over P. amplexicaule, although, as your correspondent remarks, the latter is sometimes as bright in colour. It is certainly much easier to grow, and its fairly free growth makes it more useful in the garden, especially if its spikes are required for cutting. P. affine, also mentioned, is, if anything, a little too free in its way of spreading in the garden, but it is well worth growing, and gives flowers over a considerable period. It is frequently met with under the name of P. Brunonis.

together these two varieties deserve more notice than they have yet gained, being nearly hardy, most effective, easily propagated, and lasting in flower from June to December in any sunny sea-side garden. E. H. WOODALL.

**Lilium superbum.**—In a swamp near Laurel, Prince George's County, Maryland, says the *Plant World*, there is a form of Lilium superbum with stems 7 feet or 8 feet tall and clear lemon-yellow flowers without spots, but with large bright green angular markings at the base of the perianth segments. The leaves are described as similar to those of the common form, although perhaps more scattered, and the flowers are similar in size and shape. Although not abundant, it appears that this plant has been known locally for many years, and that a few specimens can be found every year.

**November flowers in the open air.**—It is only that we can, even in the south of England, find such a wealth of flowers in the open air as we have at the present time. Looking round to-day (November 20) I find the Dahlias still as fresh and green as at mid-summer, and the old scarlet cactus variety Juarez covered with bloom,

Bridesmaid, white, tinted lemon; Cinderella, purple; Charles Woodbridge, crimson; Cycle, ruby-red; Daffodil, yellow; Frances Humphries, orange; Fusilier, coral-pink; Gloriosa, scarlet; Harry Stredwick, dark crimson; Harmony, bronzy-yellow; Keynes's White; Island Queen, mauve; J. E. Frewer, vermilion; Lady Penzance; Marquis, maroon; Matchless, dark crimson; Mrs. A. Beck, salmon-red; Mrs. Barnes, lemon, tinted pink; Mrs. John Goddard, rich crimson; Mrs. Wilson Noble, salmon-pink; Night, dark crimson; and Starfish, scarlet.—S.

CROCUS LEVIGATUS.

COULD we only induce the sun to break more frequently through the clouds which shroud it from view on so many of our November days we might have our gardens brighter than now. Even as it is, we do not take sufficient advantage of the material at command, so that when a bright day comes we may have some flowers which will respond to its charming influences. Even if we have only two or three of such days in the month, we can find in some of the Crocuses flowers which will give us what we require. Of one of these—only a variety of C. Boryi, according to some—I

Mr. Wolley-Dod's experience with *Aster diplostefioides* will but confirm many in their poor opinion of this fine flower so far as its perennial habit is concerned. One would, however, like to know if it is still grown by Mr. Marshall at Bexley Heath. That gentleman received a first-class certificate for the plant at a meeting of the floral committee of the Royal Horticultural Society on July 26, 1892, and the illustrations which appeared in the gardening press at the time led to considerable inquiry for this *Aster*. At that time it was also grown at Kew and at Chiswick, where it was seen by the floral committee on July 22, and certificated then also. I have seen something of and heard a great deal about *Aster diplostefioides*, but can, unfortunately, give little hope that it will prove anything but a biennial in all save a very few gardens. If Mr. Wolley-Dod could induce the owner of the garden in the Peak of Derbyshire to tell us something about the conditions under which he succeeds in preserving this *Aster* he will confer a favour upon many of us. S. ARNOTT.

*Cursethorn, Dumfries, N.B.*

### PEONIES.

In a note concerning these plants at p. 402 Mr. J. C. Tallack refers to the named kinds of Peonies in such a way as to cause them to be regarded as of weakly growth and constitution. The passage to which I refer runs thus: "I have tried many named varieties, most of which have failed to make crowns strong enough for flowering." It is not that I dispute the truth of this statement. As I well know, there are plants of this kind that no treatment would ever induce to flower in any way satisfactorily with the best methods of culture. The plants that fail to flower with years are usually not worth the time they take to plant, for they throw many more shoots from the clump, yet all are weak in the extreme. We have no group of hardy plants possessing greater vigour of constitution with perfect hardiness than the section of Peonies including *P. officinalis*, *P. albiflora*, *P. sinensis*, &c. Without exception the named Peonies are the most vigorous, in this respect surpassing the old crimson form in general robustness and vigour. Indeed, when established, the Chinese Peonies—which, I take it, are those referred to as the "named varieties" by Mr. Tallack, will readily attain 3 feet or more high. A dozen to a score of stems is what a good clump of Peony should produce at the fifth year from planting, provided the plants are well done at the start, the magnificent blossoms in their well-nigh endless shades of colour being borne profusely, and often on branched stems where the culture has been attended to. To begin with, a fair example of Peony for planting should possess two or three good eyes or crowns of the size of a small acorn, and if with young, recently-formed tap roots not hardwooded or cankerous, should in a year or two make fine plants. Indeed, a good plant of *Peonia sinensis* has in a large number of varieties as large, plump crowns as the *P. officinalis* group, only that the former vary in their strength occasionally. It is, however, quite clear that Mr. Tallack has not had to deal with such plants as these, which, if planted at the end of August or early in September, would be sure to give satisfaction. Peonies are among the easiest things to cultivate, provided we adopt a few simple rules, the most important of which is planting or transplanting in early autumn with as much of the foliage as it is possible to retain.

Valuable plants of these noble garden flowers are sacrificed year after year by dividing and planting when growing in early spring. It is not possible to select a worse time, as the plants rarely take to the soil during that season, and virtually exhaust themselves by existing on the stored-up energies of the plant. Nor is this all, for a plant moved at such a time will scarcely be

able to form anything but the weakest bud at the base, resulting in a weak growth another year, and so on for three or four years before the plant has properly recovered. It is in this way the Peony, which is certainly among the grandest of garden flowers, is often lost.

The best guide to purchasers of Peonies is the size of the current growth above ground and the size and number of crowns below. Plants with two or three good growths are quite large enough to start with, and with a depth of 2 feet or 3 feet of heavily-manured soil there need be little fear of the result when planted in the early days of autumn. E. JENKINS.

*Hampton Hill.*

**Rabbits and Antirrhinums.**—I would be very much indebted if you will tell me whether rabbits will eat Antirrhinums.—G.

\* \* I have not as yet found anything in hardy plants except Daffodils that rabbits will not either eat or nibble. Carnations and Starworts are perhaps the favourites. All, however, are mutilated to some extent except in the very rare cases where the foliage is very objectionable to them, as the Daffodil and (nearly always) Poppies and Foxgloves.—E. B.

**Daisy Snowflake.**—Early in the spring of this year I divided and replanted a bed of this and coloured Daisies. I had previously given the ground a liberal dressing of manure and the plants made good growth, covering the surface by the time they came into bloom. This Daisy is probably the best of its colour, and when in full bloom the mass of pure white flowers was certainly very effective. What impressed me, however, was the length of time the plants remained effective and the duration in good condition of the individual flowers. My soil is light, and the weather was very hot and dry for several weeks, but this Daisy bed was a sheet of white bloom for upwards of two months. A bed of Rob Roy close by did not last out nearly so long, in fact was quite over when Snowflake was still in fine order.—J. C. B.

**Hardy hybrid Water Lilies.**—The notice of various kinds of Nymphaeas which appears in last week's GARDEN over the signature of Mr. Greenwood Pim may be supplemented by the experiences of others who have attempted to grow a few of these lovely flowers under other conditions. I have often had the pleasure of viewing Mr. Pim's collection, and can testify to his success in growing robust and free flowering plants of many of M. Marliac's varieties in a shallow artificial pond of small size, the crowns of the plants being not more than 8 inches below the surface of the water, which has been at least on one occasion coated with 3 inches of ice. I have been less fortunate. On the margin of a small lake I dug a pond for the growth of interesting aquatics such as these, and filled the bottom with rich mud, leaving 18 inches of water above it (winter level). The pond communicates with the lake, but is protected against water fowl by wire netting. Four plants of *Nymphaea Marliacea Chromatella*, *carnea*, and *odorata sulphurea* were first planted, and they threw up leaves in due course, but later on the leaves kept diminishing in number, until in the autumn only one (*N. M. carnea*) survived and flowered. This year I added two more and kept a more careful watch over their development, and discovered that a number of caddis worms were in the pond, and that they preyed on the young leaves, and were the cause of failure. Curiously enough, they do not attack the young growth of the common white or yellow indigenous species. I then surrounded the plants with perforated zinc cylinders which successfully protected them; but as the water level rises and falls, this is insufficient, and during this wet summer while I was absent from home the larvæ took advantage of the zinc being submerged, and again destroyed all the plants except one. It would appear, therefore, that these larvæ which abound in all waters, whether running or stagnant, will prevent the general introduction of these charming

water plants to our lakes and ponds in country. In artificial pieces of water near town where the stone flies do not exist, there seems difficulty in successfully cultivating them. I inclined to make a further attempt by closing communication between my pond and the lake and putting some perch into the former to feed upon these larval pests.—W. DE VISMES KA *Drumruske House, Monaghan.*

### FLOWER GARDEN NOTES.

**TUFTED PANSIES.**—Evidence of the mild autumn is to hand in many thoroughly good flowers. Tufted Pansies, the sorts responsible for the same being Bullion, William Niel, Annie King, Crisp King, Archie Grant, Iona (a good flower the Countess of Kintore type and more inclined to the tufted growth), and a lavender sport from White Swan, always the largest flower I have. All are from strong, late August-struck cuttings and whether transplanted to the positions they are to occupy another season or still in the cutting frame, are alike very healthy and vigorous; in fact, so vigorous are they that, given a fair open winter, we are sure to get a grand display. They are just about the type of plant that have obtained in damp seasons from early July striking, and if they hold their own well they will be no necessity for division, except in one or two cases where the stock is limited. Will a writer well versed in Tufted Pansies tell me the origin of Annie King? Alike in density of habit and from a flowering standpoint, it is one of the best; the smooth, shining foliage also is very distinct, but in hot, dry seasons it runs out bare, assuming markings after the York and Lancaster type of flower, and leading to the inference that must be a sport from one of the striped varieties. It would be interesting to know how far sports will preserve their true character through the season in ideal Pansy soil. Here they begin to run out with the first spell of hot, dry weather and although by mulching and watering in the flowering season is well sustained, the tendency to colour-running is not checked. This is not great moment in large mixed beds, but is naturally somewhat awkward if particular shades have been planted to contrast with other things. A sport from White Swan, for instance, which in early stages is a fine lavender with a black eye, and in that form makes a splendid contrast with plants like Mangels Pelargonium, is at the end of a dry time almost unrecognisable, producing flowers very like those of the parent, only with darker eye.

**MIXED FLOWER BORDERS.**—Although a general mixing up of plants, either hardy or tender, is not to be recommended for the flower garden proper, it may be practised with good results on outlying borders mainly for the purpose of supplying colour in quantity, and if this is the chief consideration a close companionship is not objectionable so long as it does not interfere with fair good growth and the production of good flowers. I have, for instance, just cleaned through a long border that was planted in the summer of 1896 with seedling Polyantheses, and between the latter later in the year with Spanish Irises, Snowdrops and Daffodils in variety. A very fair result was obtained from the bulbs this spring, and the earlier of them are just now pushing through very strongly, giving promise of a still better supply for the flower basket in the spring of 1898, towards which end the Polyantheses in many colours will also materially assist. The bulb planting was effected without injury to the Polyantheses by working a fork straight down its entire length immediately in the centre of the rows, so that the planting stick was easily inserted and a little of soil from the potting bench placed in each hole so that the bulbs rested on a sound bottom. I may note that the Daffodils were chosen to represent a long season and include *obvallaris*, *princeps*, *Horsfieldi*, *Queen of Spain*, *Barri conspicuus* and the single and double forms of the late-flowering poeticus. This particular border has a west aspect, and so the Spanish Irises come in a bit late

those planted in the open quarter. At the end of his mixture are large clumps of *Chionodoxa* lutea and *C. Tmolusii*, the latter a deeper blue than the better-known variety, also a clump of *Anemone fulgens*. As the *Glory of Snow* is in considerable request, I am trying a path on a due north border with the view to still further lengthen the season. Other stretches border that will, I think, look well, and also furnish a very acceptable supply, are planted respectively with the taller *Campanulas* and *Doronicum*, with a goodly carpeting of *Saxifraga umbrosa*, a humble flower, but wonderfully useful and light in a cut state and standing well. With respect to flowering plants of taller growth than the majority of those already mentioned also required for the flower basket, there is no reason why they should not be planted in special beds in the flower garden if space is not available elsewhere, only if general mixtures are made the planting must be well done, for even with heavy weekly cuttings a certain amount of flower will remain of different things requiring careful grouping to ensure a pleasing contrast in the beds. In the case of small gardens I would, however, recommend a greater number of small beds, and at the most two or three species in each rather than a great variety in one bed, as there are few flowers that do not show to the best advantage when grouped together in quantity. This applies to the flower garden proper, and, as I have said, when a pleasing display is as much a question as securing cut bloom for other parts of the garden where the latter is the main consideration, a general mixing together is not objectionable, although even here a little care may be shown in the arrangement.

**CHOISYA TERNATA.**—The planting of sundry well-rooted cuttings of this beautiful evergreen against a low wall has led me to draw attention to its merits. Its inclination is more towards assuming a bushy habit, but it covers a wall well if lightly fastened to the side and the very slight protection necessary is thereby afforded. Introduced from Mexico as far back as 1825, it figures in old garden books as a stove evergreen, and is therefore one of the many instances of plants utilised for outdoor work that in bygone days were only grown under glass. Given a warm position on a south wall and a sandy loam with gravel or sand below, it grows luxuriantly and flowers freely, requiring no protection. It is produced readily from cuttings, but good large plants may be obtained much more expeditiously from cuttings, the only treatment necessary, if low shoots are available, being to slice them a third through and peg into the ground at the part of the shoot where they can be most easily and permanently secured, keeping the ground fairly moist for a year until root action has commenced. The fact that this Mexican plant can be grown thus easily on the side leads to the inference that in its native habitat it must be found on high ground where the night temperature is occasionally low, and is an illustration of the importance of obtaining accurate information as to the conditions under which new plants are found. Take for instance the case of the *Choisya* under consideration and the lemon-scented *Verbena* (*Aloysia citriodora*), occasionally used as an outdoor wall plant, and introduced from Chili. The latter country, taken as a whole, is some 10° further from the equator than Mexico, and yet the *Choisya* is the hardier plant of the two—an evergreen, too, whilst the other is deciduous.

**CARNATIONS.**—As an outcome of the recent communication as to the baneful influence of fog on

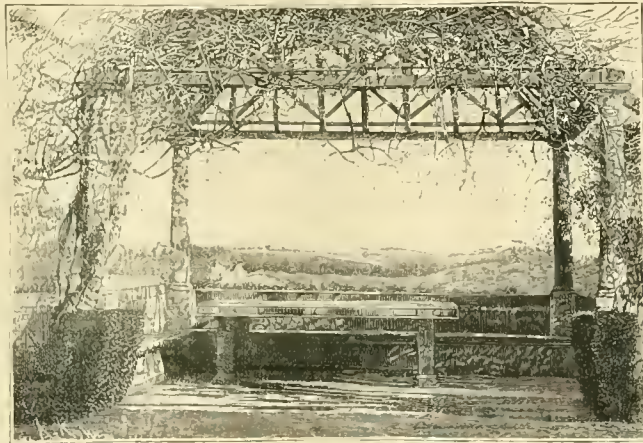
Carnations, I shall watch the progress of my plants this season with a certain amount of interest. We have already had much more than the average amount of fog—nasty fogs, too, that have left their mark on everything outside in the form of a black sticky deposit of sufficient thickness to necessitate washing all lights of houses and pits in which plants are housed. The Carnations look remarkably well at present, and occasional blooms, such as they were, have testified to the mildness of the season. Ernest Ladham's Pink has also given us a few very fair flowers.

Claremont.

E. BURRELL.

### AN AIRY BOWER.

This little creeper-clad bower with its stone table is pretty, and in the country it comes from (Portugal) no doubt its shade is very welcome; but it would not be less so in our country in points and positions commanding good views. With our present stock of climbers such things are always very welcome supports for such plants, which need not be the commonest. And why should we not have more like it, which give a little shade, yet allow freedom to the air, which the mouldy, close wall in summer rarely does? Notwithstanding the pains people take with their summer-houses in pleasure grounds, it is surprising how little



An airy bower in a Portuguese garden. From a photograph sent by the Marquis de Fronteira, Lisbon.

they are used, and partly, no doubt, owing to the want of air and sweetness, being, indeed, better fitted for earwigs and woodlice, walls and roof being often full of dusty decay. Why should we not use our beautiful climbers to make these roofs as in the case of this little bower? All we want is a stout framework and a few bamboo or other sticks over it, and in that way we should be rid of decay and insects, and also to some extent the cost of the roof. Ivy makes a good evergreen roof, as we may see now and then on an old farm hovel, where it plants itself; but it is easy to form bowers of these handsome Ivies and summer-leaving climbers like Vines, as we occasionally see them about French inns. To get rid of the rustic work as used in our summer-houses would be a gain, as that begins to rot before it is put up. We also like the use of the stone table.

**Lobelia cardinalis.**—Doubtless "A. D." has been unfortunate in his experience with this plant, for there is no question as to its hardiness here in the coldest part, perhaps, of Suffolk. I have wintered it here for several seasons, and in a neighbouring garden it withstood the very severe

winter of 1894-95 without the least protection, and flowered profusely in the autumn of 1895. I am of opinion that it is far more easily managed on a somewhat moist, heavy soil than in a light and sandy one, for on a much lighter soil than mine about ten miles distant a nurseryman friend cannot keep it through the winter. Possibly the soil that "A. D." grew it in was unsuitable, though it seems strange that what suits a plant in the summer should not do so in winter. The young shoots are now about an inch above the soil here, and I should be very loth to disturb the plants, though if I was not pretty sure of their living I should certainly take your correspondent's advice—doubtless given in good faith—and lift them. Those growers having a very light soil to deal with may with advantage dig in a little marl and clay, as this would certainly increase the vigour of the plant even if it had no bearing upon its hardiness or otherwise. The firmer the root-hold the plants have and the more thoroughly they are established the more likely are they to succeed.—R.

### BASAL ROT IN DAFFODILS.

So far as my experience goes in respect to this much vexed question, I fear Mr. Docker (p. 400) is still a long way from a correct solution of the difficulty. At the outset it should be noted the variety mentioned, viz., *Mary Anderson*, is among the most difficult to satisfy in a large number of gardens, and therefore could scarcely be considered as representative of this lovely group of hardy flowers, and I think Mr. Docker's contention fails somewhat to convince by the rather conflicting statements in the note here referred to. For instance, these very bulbs are referred to in one passage thus: "A finer-grown sample of bulbs I never saw," while a little later this sentence occurs, "There was evidence of unripeness to support this view," evidently inferring that the bulbs were lifted before fully mature. If this was the case the bulbs could scarcely have presented the appearance indicated in the first quotation, because *Mary Anderson* is by no means the most vigorous rooting variety of this group. Indeed, in many soils it is a feeble grower generally, and, lacking constitution, frequently disappears in a year or two, though its behaviour is very curious even in this matter at times, and conflicting also. But, assuming the theory of "too early lifting of the bulbs" to be a correct one, then basal rot should be non-existent where the bulbs are permanently planted. The very contrary is the fact, not only in the case of *Mary Anderson*, but with the Tenby Daffodil, as also some strains of *Van Sion* double, or even our common *Lent Lily* where attempts have been made to cultivate it. So also many of the white-flowered varieties, and *Ard-Righ* among others. For these generally considered weak growers annual lifting has been advanced as the best means of keeping them in good health the longest time, and, if coupled with change of soil also, I can answer for its utility. And, so far as lifting is concerned, most growers are content to take the foliage as their guide, for with the decay of this there is little further use for the roots, since no further supplies of sap, even if forthcoming, could be elaborated. The difficulty in this direction comes to those who largely grow the flower in question when a wet season occurs and the foliage remains green and fresh far into July. At such times, though fortunately they do not occur frequently, the late-flowering varieties, poeticus for example, have to be raised before the foliage decays, otherwise renewed root action would ensue. These instances are, however, rare, and in a year like 1897 no such cause need exist. But with some of the poeticus varieties it is difficult to know, even in a year like the present, when there is an entire cessation of roots. Even when the leaves are quite gone, you may raise the well-known ornatus and find root-fibres of all lengths, from one-sixteenth of an inch to several inches long; fibres, moreover, that do not perish when out of the soil, as they do in the great majority of kinds. Usually, where the base of a bulb is badly cankered by this disease, it so

covers the area of rooting as to hermetically seal it, and thus effectually prevent the emission of roots altogether. Nor is it wholly external, as frequently the disease penetrates the birthplace of the roots or fibres, and the points becoming affected, the whole is quickly enveloped by the disease. It is quite a different matter when from a partial attack of this canker space still remains for the roots to descend, and so long as the fibres remain healthy it will make little or no difference whether their descent is perpendicular, or whether they radiate around the bulb. Indeed, in this connection it is surprising how the root-fibres of bulbous plants often shift for themselves, bulbs, for instance, that have been accidentally turned upside down, and notwithstanding that their natural descent is straight down. Such bulbs I have repeatedly found with the roots turned right over, and instead of going direct into the soil, as might be expected, have pierced through their own skin and descended in that way, emerging into the earth at the narrow portion of the neck of the bulb. The latter meanwhile, after producing a crescent-like curve at the apex, has started the upward growth as usual.

Hampton Hill.

E. JENKINS.

### SHORT NOTES.—FLOWER.

**Fampss Grass in Wales.**—I am sending photo of clump of Fampss Grass grown on the lawn here; it has forty-five spikes of bloom. There is another similar clump within six yards. The plants are growing in a very damp soil and partially shaded with trees and heltered from north-east winds.—J. D., Peniarth.

**Linum narbonense.**—Permit me to call attention to the wrong spelling of *Linum narbonense* (see page 401). The adjective ought to have three "n's," not four. It is true the modern name of the town is Narbonne, but the Latin name was Narbo, and the adjective derived from it, which has good classical authority, *narbonensis*; neuter, *ens*.—C. W. Dob.

## STOVE AND GREENHOUSE.

### POINCIANA PULCHERRIMA.

The flowers of this stove plant are very pretty and bright, produced on showy corymbs during the late summer and autumn, and, taken all round, it is a plant deserving of attention. The graceful Fern-like foliage, when the plants are healthy, is a nice set-off to the flowers, and these occur in a fairly long succession on the same spike. Its culture is not so easy as that of some other stove species, but, given healthy plants, it is not difficult to keep them so. It grows into a large, rambling tree 8 feet or more high if left alone, but by cutting back after flowering, may be kept more within bounds and makes nice showy pot plants. It is grown from seeds and cuttings, the former being sown in strong heat. The cuttings should be made of young half-ripened wood and furnished with a short heel of older wood if possible. Place these not too deeply in a firm compost, about three around the edge of a small pot, and before the foliage has time to flag put them into a gentle bottom-heat in a propagating frame. It is not free-rooting under any circumstances, but with care many of the cuttings will strike. The plants should be slightly hardened before potting, but very carefully guarded against cold draughts, or probably many of the leaves will drop off and the plants be weakened. From the first, pot very firmly, using a compost of peat and loam, with coarse sand and crushed charcoal rather freely added. A little of a good concentrated manure may also be added at the second potting, this being more to their taste than natural manures and not so likely to clog the compost. The first flowers usually appear

when the plants are about a foot high, and in this stage they are very pretty for grouping or table decoration, but a better plant is obtained by pinching once or twice and taking up four or five stems. Overpotting must be guarded against, anything like a sour or water-logged soil being fatal, and until a good spread of foliage is produced water must be very sparingly applied. The atmosphere of the house should be kept moist and light syringings are helpful on bright days in keeping the growth free of insects. But a good light and moderate circulation of air are also important factors, these tending to a hard, solid, yet free growth that is sure to flower more freely than very soft sappy shoots. I have seen *P. pulcherrima* grown as a pillar plant in a large stove, and it had a very pretty effect. It is rather apt to get bare of foliage beneath, but this will not occur if the lower part is not too much shaded. Many err in getting this class of plant to cover its space too quickly, running the shoots a long way each season and taking no pains to cover the lower part, but if some nice stubby side branches are secured as the plant is growing, these may be cut back occasionally, and by keeping the top thin will break and give plenty of young wood. Even as a climber on a trellis it does well, and here it should be planted out in a medium-sized border, this being well drained and filled with a similar compost to that described. It is sometimes grown in a rather wild way, and just before the flowers open tied in to balloon and other shaped trellises, many of the stems being usually broken or twisted in doing so. This is the least satisfactory way of all. The scale is very fond of the rough older bark, and red spider sometimes attacks the foliage, but with ordinary care neither of these pests gives much trouble. Old plants that have been cut into shape after flowering, or others headed back for propagation or otherwise, must not be watered for a time, but kept well on the dry side until the cuts are healed. H.

**Posoqueria fragrantissima.**—This very sweet-scented stove shrub is not much grown, but the blossoms are very pure and chaste-looking when the plant is healthy. They occur on loose corymbs at the ends of the shoots, each flower having a long tube and recurving petals. It is happiest under cultivation in a light, sunny house where there is plenty of heat and moisture, the sun shining full on the leaves in the afternoon doing no harm. Small plants are very apt to damp off if heavily watered. It is best grown in equal parts of peat, loam and leaf mould with a good sprinkling of sharp sand and a little manure for strong plants.

**Luculia gratissima.**—Where the occupants of the greenhouse are confined altogether to pots it seems useless to expect a thriving specimen of this *Luculia*, but if it is planted out under similar conditions to those that are so successful in the case of the *Camellia*, then it may justly be claimed for it that it is one of the finest winter-flowering shrubs we have. It does not bloom at all freely when small, but as a bush from 6 feet to 10 feet high it will at this season of the year be studded with large Hydrangea-like heads of beautiful pink, deliciously fragrant blossoms. Like the *Camellias*, this *Luculia* needs liberal watering and syringing during the growing season, hence the bed in which it is planted should be thoroughly well drained. The soil, too, must be of a good open nature, say two-thirds turfy loam to one third of fibrous peat, with a liberal admixture of silver sand and nodules of charcoal. After flowering it should be pruned back and in the spring encouraged to grow away freely.—T.

**Carnation rust, cure for.**—When in Germany the other day I visited some large and well-kept gardens, partly English, partly German,

Going round the greenhouses I was particularly struck with the unusually healthy, strong appearance of a large quantity of Tree and other winter-flowering Carnations, and turning to the gardener, a German, who was kindly showing me round, I said, "These are wonderfully healthy plants." The blurbloom on them is what sometimes see in a well-grown Carnation before an autumn morning, but never before had I seen Carnations grown indoors. "What do you do to these?" said I. "Syringe them," he replied, and if you like I will write you out the mixture we use." I give it for the information of readers who are Carnation lovers to try what can make of it. I have not used it yet. Mixture for killing the Carnation disease (Carnation rust): 1, 2 lbs. of vitriol; 2, 4 lbs. of (freshly slaked); 3, 27 gallons of water 2 lbs. of sugar. 1, 2, and 3, mix well together clear (not blue); add No. 4 and well mix. Syringe once a week early in the day. The syringing should be done quickly, finely, and evenly. M. T. E., Woodlands, Cobham, Surrey.

**Rust on Malmaison Carnations.**—Some years ago I took the old Souvenir Carnation in hand, I experienced no difficulty in keeping the plants clean and healthy all the year round. At length rust appeared, and for some time of opinion that it could not be classed as a disease, but was a symptom of defective culture the result of torpid root action arising from continuous rain when the plants were in the air. The first appearance of this pest was a lot of potted layers which I knew had been watered, and I have invariably found that of moisture at the roots will bring on an attack. From what has come under my own observation I am convinced that were the plants kept all the time through under glass they would seldom be attacked by rust. I have had plants which placed in the open after blooming remain healthy until heavy rains came at the close of summer, and then become badly spotted. I have more than once been struck with the difference between these plants and some which have remained under cover, the latter being quite free from disease, the foliage having that blue tint that characterises this Carnation when in best form. The roots of Malmaison Carnations are extremely sensitive to excess of moisture; a succession of heavy rains renders them tender, and brings the foliage into an unhealthy state, thus inducing an attack of rust. I would advise who can do so to keep their plants either in a well-ventilated house.—J. C. B.

**Yellow Callas.**—"D." (p. 398) is, I feel, the only one who might truthfully confess to a certain feeling of disappointment in connection with the yellow Callas, as there is a very good idea that they are in all respects, save colour, the counterpart of the common Arum Lily, and the same treatment; whereas it has been several times pointed out in THE GARDEN (notably the coloured plates of *Richardia Elliottian* and *R. Pentlandi* respectively were issued), they were totally dormant throughout the winter and during the growing season they need the temperature of an intermediate house, cool end of the stove. As summer advances this is not necessary, but about February when as a rule they start into growth, the plants grow more kindly in an ordinary greenhouse temperature. I cultivate a considerable number, and just now the dormant tubers in the pots they have grown in stood on a shelf at the warm end of a greenhouse—that is to say, a structure that does not fall below 50° during the winter. They are kept almost dormant in February, when the tubers are shaken out of the old soil and repotted in a good compost, such as loam lightened by an admixture of well-decayed manure, leaf-mould and charcoal. The tubers are placed at such a depth that the upper part is about an inch below the surface of the soil; then in an intermediate temperature and slightly moistened they soon start into growth. The roots are produced in the manner of a *Caladium*—that is to say, o

over part of the tuber just at the base of the new growth. When shaken out for repotting it will be sometimes found that an offset or two can be separated without injury, and if these are potted singly and placed under favourable conditions they soon reach flowering size.—H. P.

### CROTONS.

Another class of fine-foliaged plants is so richly varied in colour as Crotons when grown under favourable conditions; but unless they receive the necessary attention and a genial atmosphere they are far from being attractive. It is probably owing to the trouble that insects give, especially when plants get old and stunted, that Crotons are not such general favourites. Large specimens when kept clean and healthy are very imposing, though it is as young plants that I think their full beauty is seen. They may be grown from 2 feet to 3 feet in one season, and with well-coloured cuttings to start with they will have highly-coloured foliage down to the base. Cuttings may be taken at any time during the winter, the stronger the cuttings the better. Where good propagating accommodation is not at hand, the tops may be rooted before taking them from the plants. A few cuttings should be removed, and the stem cut about half through and the knife run up so as to split the stem about half an inch or rather less, a small wedge being inserted to keep the cut open, and then some peat, Sphagnum, and sand bound round. If this is kept moist, but not too wet, roots will soon make their appearance. If taken out and potted carefully they will only require to be kept close for a few days. After they are established, the most essential points towards success are light, heat and moisture. They should be potted on before they have become root-bound, until they are in the largest size which is intended to give them. Very effective plants may be grown in 4½-inch pots, but for larger specimens pots should be used according to convenience. Crotons are not so particular as many subjects with regard to soil. I have seen them grown successfully in various composts. I prefer good loam, leaf-mould, a sprinkling of sand, the addition of a little horn-savings or bone-meal being beneficial. If attention is paid to watering, they may be fully exposed to the brightest sunshine, and the more they are exposed, the brighter will be the colouring. Clear soot-water may be recommended both for watering and syringing with, besides being one of the best fertilisers, it is destructive to insect pests. It could not be depended upon to eradicate mealy bug or scale, but if plants are clean to start with it will prove a thorough preventive, provided the syringe is used so as to thoroughly wet the leaves underneath as well as above. Although Crotons require a high temperature and plenty of moisture while growing, if carefully hardened off they will last well for a considerable time in a low temperature.

**VARIETIES.**—When required for table decoration the narrow, drooping-leaved varieties are most appreciated. Of these *superbus* is one of the best. Countess closely resembles it, and is perhaps better known. Of the two I prefer the latter. In *caudatus tortilis* the twisted leaves are a most beautiful plant. *Prince of Wales* is of similar habit, but a stronger grower. *Thomsoni* is a beautiful Croton when well developed, but one of the most difficult to do. The same may be said of *Aigburth Gem*, which I lately saw some beautiful plants of this, which is comparatively new. *Golden King* is another variety with narrow twisted leaves. Of those with medium-sized leaves which change

to a bright red hue, *Musicius*, *Etna*, *Lady Zetland*, *Flamingo*, and *Mortfontainensis* are among the best, and of those that retain the yellow variegation, *aneitnensis* and *Weismanni*. The latter, though a very old variety, still holds its own. Of large-leaved sorts *Thomsoni* is the best yellow. *Alexander III.* colours very richly. *Newmanni* should always find a place where Crotons are grown. *Bergmani* and *Baron Frank Selliere* are large-leaved varieties with creamy-white variegation. *Reedi* is a later addition, and one of the best. Many more varieties might be named as being equally desirable, but those making a selection cannot do wrong in growing the above. A.

***Panicum plicatum.***—For the decoration of large halls or similar spaces in the house I find this a very useful plant when sown early in the year and grown on freely. An excellent way of getting big Palm-like specimens early is to prick off the young seedlings into pans, and then transfer the whole of the plants in each pan bodily into a large pot of fairly rich soil. In a few weeks they grow into huge specimens 5 feet high and nearly as much through, and these are very useful throughout the summer. To keep the plants green and healthy-looking, an abundance of water is necessary through the growing season. I find this green-leaved form far superior for general purposes to the variegated form which is used to be more commonly grown, but both make handsome plants when grown in a mass and not as single plants.—J. C. TALLACK.

***Ceropegia elegans.***—I enclose a few blossoms of this interesting and apparently little-known climber, which was figured in *THE GARDEN* in vol. xviii., and seems to have been scarcely ever mentioned since. It is a slender twining plant with opposite leaves, growing freely in an intermediate temperature such as suits the majority of *Adiantums* and many *Orchids*. The flower is not very showy, but quaint and attractive to those who can admire quiet beauty. It is trumpet-shaped, the base being nearly spherical, then suddenly narrowing and gradually widening to the mouth where the petals are folded inward so as to meet in the middle, and are here furnished with a delicate fringe of hair. The ground colour is creamy white, densely spotted with chocolate. Several flowers are produced at each joint, and with me plants in 6-inch pots are never (or hardly ever) out of bloom. It seems easily propagated from cuttings.—GREENWOOD PIN.

***Bouvardia corymbiflora Humboldtii.***—For some unexplained cause this well-known plant is almost universally referred to in plant lists as *B. Humboldtii corymbiflora*, thereby reversing its specific rank. Why this is so is not at all clear, as by a moment's thought the specific title is at once obvious. As an autumn-flowering plant it is of especial value, being not only free in growth, but decidedly vigorous and easy of culture. As an early autumn flowering plant, however, it is worthy of note, and, being of easy culture, there is no reason why long sprays of it should not be abundant in private gardens during the early autumn months. It is quite easy to make capital flowering plants in six or seven months, and where very early cuttings are obtainable, handsome bushes with ten or a dozen stems may be grown. For early work, however, this kind is best as a pot plant. The plant is of erect growth and attains to fully 2½ feet or 3 feet high when well grown, with a terminal corymb of pure white blossoms.

***Schizostylis coccinea.***—Some plants of this useful plant lifted from the border a week or two back are now providing a valuable lot of spikes that are particularly serviceable. It is one of those easily grown plants that are too frequently neglected and allowed to remain too long in pots without attention. But if planted out in early spring in good soil it is surprising how quickly the plants recover, while those with

any strength are sure to flower the following autumn. In some gardens the clumps are simply parted and planted out in this way, but having given both systems a trial, I can speak strongly in favour of planting single crowns in preference to the clusters. By selecting the strongest pieces some very fine spikes may be relied upon each autumn. When it is remembered how few such things exist, they are more than worth the trouble their cultivation involves. The planted-out single crowns always have a fresh, clean look about them, and by placing half-a-dozen in a 6-inch pot a good display is secured. Where needed only for cutting, the plants do equally well if planted into boxes and placed in cold frames in September.—E. J.

### SHORT NOTES.—STOVE & GREENHOUSE.

***Begonia Gloire de Lorraine.***—In referring to the parentage of the above in *THE GARDEN* (p. 354) I inadvertently gave *B. Martiana* as one of the parents; it should have been *socotrana*. I find the raiser gives *socotrana* and *Dregéi* as the parents, but the general habit certainly suggests some affinity to *Martiana*.—A.

***Carnation Snowflake.***—The flowers of this are of medium size and pure white. The great recommendation appears to be the free branching habit of the plant. We are always wanting good white Carnations during the winter, and if the above proves to be of good constitution, it will be a welcome addition to this useful class of flowering plants.

***Panercium fragrans.***—This is a very beautiful plant; the lovely flowers, produced on large umbels every season, are always anxiously looked for. They are fine either on the plant or cut, and although some florists have an objection to them, as hiding other flowers in bouquets or wreaths, I fail to see it. It is one of the easiest grown stove plants, thriving under almost any treatment if not over-watered.

***Lily of the Valley fruiting.***—With reference to Mr. F. W. Burbidge's note on *Lily of the Valley* in fruit, and the excellent illustration of the same that appeared on page 319, I may mention that last year I saw a large bed quite red with berries at the Devon Rosery, Torquay. On inquiry I found that fruit had set occasionally in former years, but never in such quantity as in 1896. The occurrence was attributed to the excessively dry spring and summer.—S. W. F.

### A MILD NOVEMBER.

THE mild weather experienced in November, I should imagine, is almost or quite without a parallel. Peas and Runner Beans could be gathered in the open garden, and Globe Artichokes and summer Lettuces cut so late as November 25. In the flower garden, too, Dahlias, the tenderest of all summer flowering plants, have been gathered after the middle of the month, while Sweet Peas, Roses, Marguerites, Wall-flowers, Polyanthus, and Anemones among others have been playing their part in giving evidence of the unusual mildness of the rapidly passing winter. *Chrysanthemums*, too, in cottage gardens have been a fine feature, and bid fair to continue until some time into December. There are advantages and disadvantages conveyed even in such beautiful weather. Everything has been flourishing and plentiful, but the soft and late growth of winter crops is sure to suffer from cold, chilling frosts and winds. The present aspect of plenty may be changed into one of scarcity as regards vegetables and salads, so that it becomes a duty on the part of those from whom a large demand is expected to provide for contingencies. Opportunities for advancing the winter's work outdoors were never better; trenching and digging, pruning and nailing of fruit trees, clearing up and surface digging of flower borders, storing of roots, and other routine work have had but very slight hindrances from the weather.

The rainfall constituted a record for November. At the time of writing there has not been more than half an inch here, and the barometer is higher than in any month of the year. Springs are very low. In some country districts a very short

water supply is no unusual experience, and in some cases entails a deal of labour and inconvenience. In large country houses where extensive decorations with cut flowers are carried out, what a vast contrast the present autumn has been compared with many of the past. So far as material has been concerned, there could not be any complaint, for the work has been comparatively easy compared to that of some years, and Chrysanthemums, which take up so much time from spring till autumn, have lost much of their value in consequence. To the large market grower there must have been serious losses from this cause alone, but what has been the loss of the few must have proved an enormous gain to the many, especially those dependent on their own productions. In the fruit gardens and orchards the fine autumn has had a beneficial influence, judging from the well-ripened appearance of the season's growth and the prominent buds on Apple, Pear, Plum, and other trees. Planting of young and root-pruning of older trees have been carried out under the best of conditions. W. S.

Wills.

## GARDEN FLORA.

### PLATE 1147.

#### TWO WATER LILIES.

(WITH A COLOURED PLATE OF—1, *NYMPHÆA MARLIACEA ALBIDA*; 2, *N. ROBINSONI*.)

AFTER another season's experience of these additions to our lakes and ponds, I am more than ever impressed with their beauty, their utility and their novelty. No such additions as these charming hybrid Lilies have been made to our lists of aquatics for very many years past, nor indeed has any other plant come so prominently to the front in our gardens for a great length of time. From the many letters of inquiry I have received I have abundant proof of the desire that exists to enter into their



Part of group of *Nymphaea Marliacea albida*.

culture. From both letters received and visits paid to other gardens, I find that preparations are being made to take up their cultivation as speedily as possible. With regard to their beauty, they have, methinks, only to be seen to be admired; even when displayed in horticultural exhibitions in a cut state they have been greatly admired. To see them at their best, however, an inspection must be made of them in their natural element. The combinations of colouring can

\* Drawn for THE GARDEN by H. G. Moon at Gravetye Manor, Sussex. Lithographed and printed by J. L. Goffart.

then be more fully realised. The common white Lily (*N. alba*) we all know, but there is in addition the white variety to be seen in the accompanying plate, *N. Marliacea albida*, a veritable giant in its way with its individual flowers fully 9 inches in diameter (my plant of this Lily has had as many as fourteen flowers on it at one time up to and approaching these dimensions). Its purity, too, is quite remarkable by the side of the old white save in the bronzy flush upon the outer segments. *N. Robinsoni* is another notable hybrid Lily; with me it assumes deeper tints than in the coloured plate, is very free-flowering, and lasts in an expanded state longer than most kinds. Being a moderate grower as regards vigour, but at the same time of rapid growth, it produces a fine effect in shallower water than the preceding kind. *N. odorata sulphurea* and its larger form have this year much improved in freedom of flowering, but they do not commence to bloom so early as most kinds. The individual flowers, however, stand up well above the foliage, and are thus seen to the best possible advantage. From the narrower seg-



*Nymphaea tuberosa*. Engraved from a photograph of young plants in the open water in Sussex.

ments and their numbers these two Lilies are quite distinct, the sulphur-yellow pervading both the segments and seed organs. Of the newer kinds tried this year for the first time especial note should be made of *N. Ellisiana*, a lovely variety, and one which will be greatly sought after. It flowers freely, has flowers of large size (and handsome foliage, too); the colour is a brilliant carmine-purple. *N. Aurora* with me is of a primrose-yellow shade, a deeper tint than in the more common *N. Marliacea Chromatella*. *N. Andreana* in colour is a purplish red, and is also of large dimensions; the leaves, possessing singularly long petioles, float upon the water quite by themselves. *N. Marliacea rubro-punctata* is well defined by its prefix; in size, however, it bids fair to approach *N. Marliacea albida*. There are other kinds on the water here which I hope to report upon later. One of these has flowers which for size are equal to those of any other kind, whilst the colour is a deep crimson. This and others will no doubt next season be seen much finer as they gain strength.—JAS. HUDSON.

\*\* From the "Water Garden," by W. Tricker, of which a review will be found on page 451 of this issue, we quote the following:—

I.—HARDY NYMPHÆAS.

*NYMPHÆA ALBA* (white Water Lily).—This species, native of Great Britain, has long been in cultivation. It is a vigorous growing plant, with

dark green glossy foliage, and large, white, cup shaped flowers. It is well adapted for use in either artificial or natural ponds, and shallow or deep water, but is being superseded by new varieties and by hybrids of greater merit.

*N. A. CANDIDISSIMA* is like the preceding in every way, except that it has larger flowers with broad petals. It is one of the best for planting in large ponds where bold effect is desired, its massive foliage and flowers standing out well above the water.

*N. BLANDA* is a vigorous and free-flowering species, somewhat similar to *N. a gigantea* flowers of dazzling whiteness, in which respect it is unsurpassed by any other white-flowered Water Lily in cultivation.

*N. CANDIDA* (syn., *semiaperta*).—A Bohemian species, similar to *N. alba*, but of moderate growth. Flowers of snowy whiteness, 2½ inches to 3 inches across, sepals tinged with green.

The Laydekeri varieties are among the choicest of hybrid Nymphaeas; their flowers are medium-sized (2½ inches to 3 inches diameter), the plants are vigorous, but not so robust like the *Marliacea* forms. They are admirably adapted for ponds of moderate size

where space is limited and the greatest variety is desired; they are also well adapted for growing in tubs.

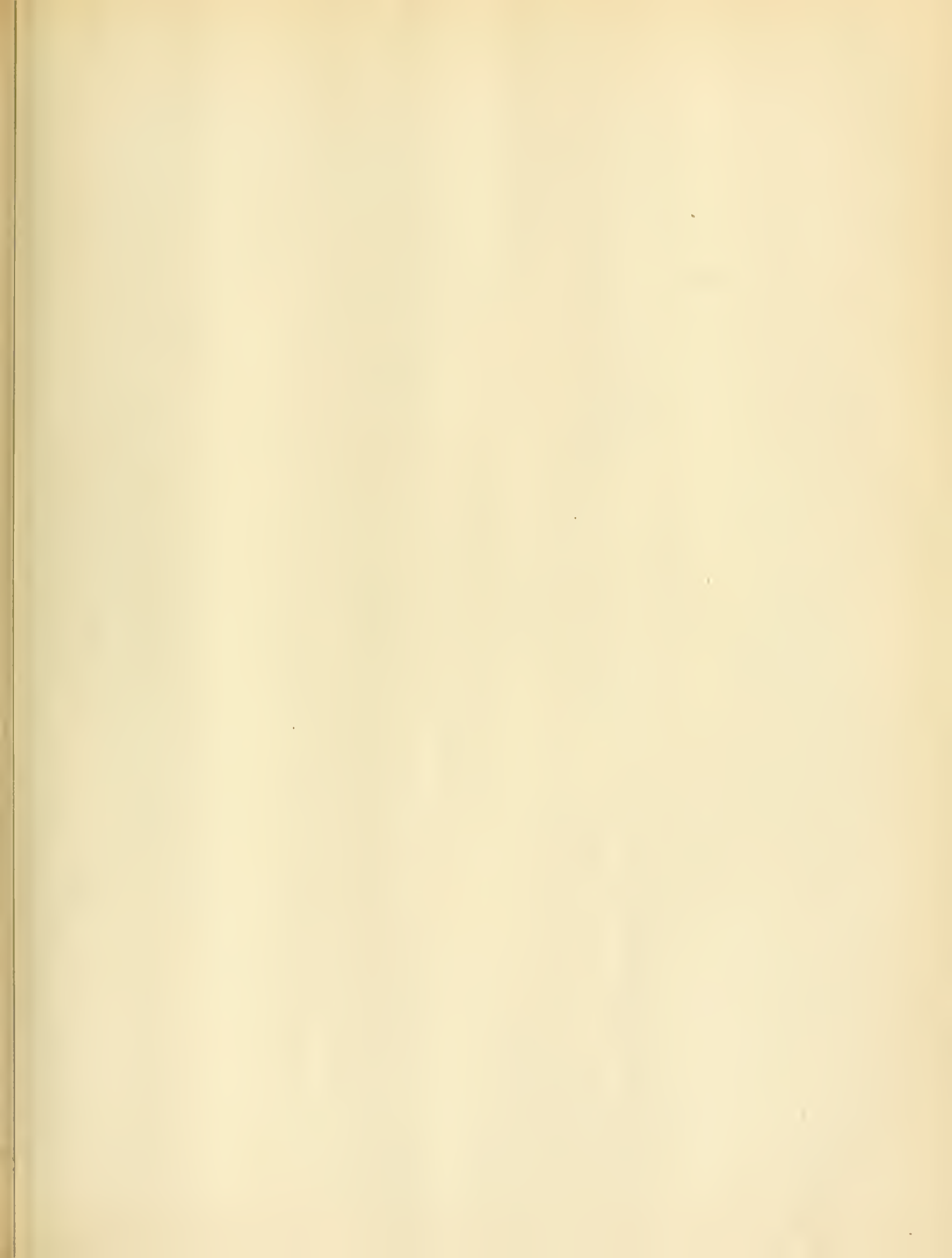
*N. L. FULGENS*, as the name indicates, is of glowing brilliant colour; petals crimson-magenta, stamens garnet-rose; flowers beautifully cupped glowing like a brilliant in the sunshine.

*N. L. FULVA* has large star-shaped flowers; the four sepals are greenish yellow, petals cream yellow, suffused with red, stamens golden yellow leaves dark green, mottled with red.

*N. L. LILACEA* has a delicately formed and chaste flower of a soft rosy lilac colour with yellow stamens. It is exquisitely fragrant, resembling a Tea Rose. Leaves deep glossy green with occasional dark blotches.

*N. L. PURPURATA* is somewhat larger than the others of this group and the petals longer and more sharply pointed; flowers very symmetric of a rich rosy crimson colour, stamens orange-red.

*N. L. ROSEA* has proved a universal favourite the peculiarity of the flowers changing from rosy pink to rose-purple as they age affords most pleasing combinations and gradations of hue. Where several plants are grown together the numerous flowers of various shades give a charming feature not elsewhere known in Water Lilies. This variety is well adapted for large aquariums and will produce its dainty flowers even when growing in a 4-inch pot, but its true character, size and colour are seen only when planted in a natural pond and left undisturbed for at least two seasons.





*N. L. LUCIDA* has large flowers of a rosy-vermillion colour, with orange stamens; leaves beautifully mottled with chestnut-red.

*N. ROBINSONI*, with flowers larger than those of the Laydekeri varieties, is distinct and unique in colour; the yellow ground colour is overlaid by purplish violet-red, deepening toward the centre of the flower; the stamens form a crown of orange-red colour. The leaves are dark green, spotted with chestnut-brown.

*N. SEIGNOURETI*.—Flowers delicate yellow, edged with soft rose and carmine, borne on erect stems, and stand about 6 inches above the water. Leaves spotted with chestnut-brown.

The *Marliacea* hybrids mark the introduction of hybrid hardy Water Lilies, and include the very best forms. Although other gems have since been introduced, they do not compare with these for general utility; the plants are vigorous and robust, flowers large, very effective in groups and masses in large ponds or as single specimens.

*N. M. CARNEA* is in every respect, save colour, similar to the preceding variety. The flower is a soft flesh-pink colour, which deepens toward the base of the petals, sepals rose-pink, with a delicate fragrance of vanilla.



*Nymphaea Marliacea carnea.*

*N. M. ALBIDA* has all the good qualities of *N. M. candidissima*; the flowers are larger and more fragrant, of a dazzling, sparkling whiteness, and produced very freely until frost. The stamens are occasionally flushed pink, especially when grown in stiff soil.

*N. M. CHROMATELLA* has flowers of a lovely primary-yellow, with deep yellow stamens, large and handsome, and is undoubtedly the best yellow hardy Water Lily. Leaves bronzy green, with chocolate-red markings. Plant very vigorous, inclined to be bunched or crowded, and should therefore have plenty of room and be in permanent quarters where it is not likely to be often disturbed. The water should be 2 feet or more deep.

*N. M. FLAMMEA* and the following varieties are of recent introduction, and are yet but little known in the United States. The flowers of *Flammea* are bright amaranth-red, shaded white; the outer petals pink, the colour deepening towards the centre, stamens deep orange.

*N. M. ROSEA* has the same vigorous habit as the preceding varieties; the flowers are of the largest size and a beautiful deep rose colour; the young foliage is purplish red, changing to deep green. All things considered, this is the best hardy pink Water Lily, large flowers, fine colour, and free flowering.

*N. M. IGNEA*, one of the most striking of recent introductions, has flowers of magenta-red and stamens orange-red. It is a brilliant flower in the sunshine, and is highly spoken of in England, where it apparently does well. At present it has not proved to be a vigorous grower nor so satisfactory under cultivation in the United States.

*N. M. RUBRA PUNCTATA* has a beautiful flower of moderate size, flowers deep rosy purple, spotted carmine, with orange stamens.

*N. ODORATA*, our native sweet-scented Water Lily, is widely distributed, and can be found in many ponds, lakes, and slow running streams. Under cultivation, associated with other species, it has been fertilised from them by insects; in this way and also by other means several forms and gradations (some very choice) in size and colour have resulted. The best forms are very desirable for their large, pure white flowers and delicious fragrance. The sepals are very often edged with pink, giving the appearance in bud of

sionally very large and hard. The flowers are large and pure white, somewhat incurving, and lacking the delicious fragrance peculiar to the type. It requires a deeper water than the type to grow it to perfection.

*N. O. MAXIMA*.—This is entirely different from the type; the flowers are large and cup-shaped; petals broad at the base, and without a tinge of



*The Florida Yellow Water Lily (Nymphaea flava).*

red on either sepals or petals. A most beautiful variety, found in New Jersey. This is probably the same as the variety *N. O. superba*. (Some doubt exists as to this and the preceding variety belonging to the *odorata* group.)

*N. O. MINOR* is, as its name implies, small. Leaves only 2 inches to 5 inches across, and flowers two to three. A very pretty plant and well suited for growing in tubs. It is found true in some sections of New Jersey in shallow water of cold bogs and poor soil. There are other forms of *N. O. minor* with somewhat cup-shaped flowers and only slightly fragrant.

*N. O. ROSACEA* in habit and general appearance resembles *N. O. exquisita*; it is, however, more vigorous. Flowers bright rose, lighter towards the centre, the rich yellow stamens producing a soft salmon shade of colour; the petals are narrow and pointed, the flower being like a pink star floating among the leaves. A very desirable variety.

*N. O. ROSEA* (the well-known Cape Cod pink Water Lily) is indispensable in any collection.



*Nymphaea dentata.*

Flowers deep pink and very fragrant. Early and free flowering; its season is somewhat shorter than that of some varieties. It produces seed freely, and to prolong the season the dead flowers should be taken off and no seed allowed to ripen, which can be easily accomplished where only a few plants are grown. In extreme hot weather the flowers are apt to bleach, but in cool sections and districts like Eastern Massachusetts the plants and flowers are to be seen in perfection.

a pink flower. A grand Water Lily for naturalising.

*N. O. CAROLINIANA*.—A natural cross that originated with Dr. Henry T. Balmson, of Salem, N.C. The petals are of a delicate soft pink and the golden stamens reflect a lovely salmon tint. It varies through several shades in colour under certain conditions and soils. The flowers are of the largest size. It is a choice and select variety, and has proved a great acquisition where it has remained undisturbed for two or three seasons.

*N. O. EXQUISITA* has large, rosy-carmine flowers, much deeper in colour than those of *N. O. rosea*, and is the darkest coloured Lily in this group. Foliage dark red. Moderate grower. A hybrid of French origin and very beautiful.

*N. O. GIGANTEA*, sometimes called the Southern *odorata*, being common from N. Carolina to Florida, and the only white variety indigenous to this section, differs from *N. odorata* in being a more vigorous grower. Large, handsome, green foliage, under side bright red. Root-stock occa-

*N. O. SULPHUREA* is distinct from any of this class. The large, handsome yellow flowers stand about 6 inches above the water; the young leaves are beautifully mottled with chesnut. A free and vigorous plant of French origin.

*N. PYGMAEA*.—This is the smallest species in cultivation; the flowers, which are pure white, are among the first to be seen in spring, and continue a long season. The species is well adapted for tub culture, also for the aquarium, and it will produce its dainty white flowers in a 4-inch pot. When planted out and left undisturbed for two or three seasons the flowers are larger and very pretty, making a beautiful contrast to the other giant species. It forms no runners or side shoots, and does not spread rapidly.

*N. P. HELVOLA*.—This is in truth more of a pigmy than the species; flowers, however, a trifle larger, canary-yellow, produced very freely. Especially recommended for cultivation in tubs and aquaria. Leaves beautifully mottled with reddish brown and smaller than in the type.

*N. SPHEROCARPA* (Caspary's Lily).—The true Swedish Lily. A distinct and beautiful species, and very unlike *N. alba*, of which some claim it to be a variety. While it is a very desirable form and highly spoken of in England and in Europe generally, it is very scarce, and does not flourish as do others under general cultivation. It has been flowered in the United States, but is apparently very impatient of removal, the least disturbance causing a check to its growth and stopping its flowering. Another drawback to its cultivation is its dislike to hot weather; if it were plentiful it would doubtless succeed in ponds where cold springs are a hindrance to the successful cultivation of other desirable species. It blooms quite early in the season; the flowers are rosy carmine, with orange stamens, deepening in colour the second and third days.

*N. TUBEROSA* (syn., *reniformis*) is a native species of the Western and North-western lakes, where it grows in deep water. A strong and robust plant. Leaves 8 inches to 15 inches wide; flowers white,  $\frac{1}{2}$  inches to 9 inches in diameter, slightly fragrant. The root-stock bears numerous spontaneously detaching, often compound tubers. This should be excluded from small ponds and should be planted by itself.

*N. T. PLANA*.—Flowers white, large and full; petals very numerous, the stamens being converted into petals, which are fluted in the centre of the flower. Plant less vigorous than the type. All *N. tuberosa* forms should be grown in deeper water than other types.

*N. T. ROSEA*.—A natural cross. Flowers are a lovely pink, standing well above the water, somewhat less vigorous than the type.

#### II.—TENDER WATER LILIES.—DAY BLOOMING.

*NYMPHLEA CERULEA* (syn., *stellata*).—This is the ancient blue Lotus of the Nile, but is not a *Nelumbium*. The flowers are light blue; petals long and narrow, sepals greenish white, suffused blue; stamens light yellow, tipped blue; leaves light green, spotted in the young state, changing to green; the underside of leaf also green. A distinct and beautiful species.

*N. ELEGANS*.—A pretty Mexican Water Lily of moderate size, 3 inches to 4 inches over. Colour white, tinged with purplish blue; the stamens yellow, tipped blue. A charming flower. Leaves long and narrow, deep green, spotted purplish brown. Well adapted for tub culture, and producing its dainty flowers very early in the season.

*N. FLAVA*.—The well-known Florida yellow Water Lily, and the only known yellow species. This has been introduced into many States and sections of the country, but has not been a success under any kind of culture. It is hardly as far north as New Jersey, a moderate grower, and produces numerous runner-like shoots forming young plants. Its greatest merit consists in its being undoubtedly one of the parents of Marliac's magnificent yellow hybrids, which are now widely known, and are many times more desirable for all garden purposes.

*N. GIGANTEA*, the Australian species, is sometimes confounded with *N. odorata gigantea*. This is probably the finest, most handsome and distinct of all *Nymphaeas*. The colour is a soft satiny-purplish blue, shading to white at the base of the petals; the stamens are silk-like, soft yellow, incurving, unlike any other species. The flower is carried well above the foliage on a stiff stalk, and is of the largest size. The leaves are green, with purple reverse. This species is very impatient of removal, repotting, or transplanting during its early stages. It should not be allowed to get pot-bound, or subjected to sudden changes of temperature, which will cause a check and a suspension of active growth. Plants, seedlings, or tubers in their early stages should be grown in a temperature of 80° to 90°; later, a temperature of 75° to 80° will suit them.

*N. GRACILIS*, a Mexican species of great merit, has large, handsome, star-shaped, white flowers, which are borne on stout stems well above the foliage. It is worthy of special note as being the only white day-blooming tropical or tender species; a very vigorous plant, free flowering, the flower possessing a delicate fragrance, resembling Lily of the Valley.

*N. MEXICANA*.—This is possibly a form of *N. flava*, which it resembles in most respects. The habit is the same, but the runner plants not infrequently produce flowers during the first season. The plant is altogether freer flowering, and the flowers are brighter and deeper in colour. The plant is as hardy as *N. flava*.

*N. PULCHERRIMA*.—Very vigorous and free flowering; possibly no other equals it. The flowers are very large under high cultivation—10 inches to 12 inches across—of a beautiful light blue, with deep yellow stamens tipped blue; the sepals are irregularly striped dark red. Unlike *N. zanzibarensis*, this variety opens its lovely flowers at early morn, and remains open until other species are mostly closed. The leaves are large, and often exceed 2 feet in diameter, having long tapering lobes and irregularly crenated margin. Garden hybrid of American origin.

*N. SCUTIFOLIA* (syns., *versicolor*, *cyanea*, *radiata*).—This is a beautiful star-shaped distinct species. The flowers are clear pale blue, shading to white at the base of the petals. Flowers very fragrant. Leaves variable, green, sometimes with a purplish tint, the underside occasionally bright red, with brownish red markings; margin smooth. Native of Cape of Good Hope.

*N. ZANZIBARENSIS* (the Royal Purple Lily).—This and its several forms are among those that might be styled everybody's flowers. They are the simplest to manage, easily raised from seed, will flourish in a tub even if the leaves are high and dry. Tubers and plants are no longer held at an exorbitant price, and they give the greatest amount of pleasure for a trifling cost. Flowers of the true form are of the largest size under high culture; the sepals and stamens are purple, with red margin; petals intense blue. One of the most beautiful and free flowering of all Water Lilies. Highly fragrant. The foliage is dark green, with blotches of reddish brown and bright purple underneath.

*N. Z. AZUREA*.—Similar to the type, but varying in colour from a light to dark blue; sepals never purple; leaves green, with dark markings, the underside green, shaded more or less with purple.

*N. Z. ROSEA*.—Similar to the type save in colour, varying from deep carmine to pink; leaves shaded red on the under side. All the Zanzibar Water Lilies are very free flowering, and are useful either for tub culture, ponds, or lakes.

#### III.—TENDER WATER LILIES.—NIGHT BLOOMING.

*NYMPHLEA COLUMBIANA*.—A deep, rich, dark red-flowered variety of medium size, 6 inches across; stamens cardinal; the colour deepens each succeeding day. Foliage dark bronzy red. Plant of moderate growth.

*N. DEANIANA*.—A robust plant with large bronzy green foliage; petals of a beautiful pink, with darker sepals; stamens red. Very free

flowering, requires plenty of room for leaf spread and a depth of water 12 inches to 18 inches above the crown of the plant. Hybrid of American origin.

*N. DELICATISSIMA*.—A delicate and choice flower of a distinct and pleasing carmine-pink colour; the foliage has a bronzy green lustre. The plant is vigorous, yet moderate compared with some others. Desirable for all purposes, and has proved one of the best for cutting, and also for winter culture.

*N. DEVONIENSIS*.—This, one of the oldest, is also one of the choicest night-blooming Water Lilies in cultivation, and is indispensable in any collection of moderate size. Under liberal cultivation a single plant will cover about 200 square feet of water surface, and produce numerous flowers. One plant has been known to have on it at one time as many as thirty-six flowers and buds in different stages of development. The flowers are large, 10 inches to 12 inches across, of a brilliant rosy red, a most pleasing colour by artificial light, and are borne on stems well above the water. The leaves are red, changing to bronzy green. The first hybrid of note, and was raised at Chatsworth, England, and named in honour of the Duke of Devonshire.

*N. DENTATA* is the largest and best white of this class. It has long pointed buds, the flowers of the largest size, opening horizontally, and measuring 10 inches to 12 inches over. The leaves are deep green with serrated edges. Native of Sierra Leone.

*N. KEWENSIS* is not generally met with, but it has established itself as a first-rate and desirable variety in any collection. The flower is a beautiful rosy red of the first size. Plant vigorous, with bronzy-green foliage, purplish underneath. A hybrid of English origin.

*N. LOTUS* (syn., *thermalis*).—An ancient species, indigenous to lower Egypt, and is associated with the Egyptian and blue Lotus, being held sacred to Isis and was engraved on the ancient coins. The flowers are white, with sepals and outer petals flushed pink, large and incurving, somewhat cup-shaped. A strong and vigorous plant, with leaves of deep green with serrated edges.

*N. O'MARANA* is of recent introduction, and has achieved a grand reputation. The flower is above the average of large flowers, attaining a size of from 12 inches to 15 inches; it is borne well above the foliage on a stout stalk, and as it opens to the full, the sepals and outer petals droop. The colour is a beautiful rosy red, with an indescribable glow produced by the rays of the rising sun. The leaves are large and of a dark bronzy red, heavily dentated. Under high cultivation it is a robust plant without any appearance of coarseness, and is also very free flowering at a very early stage. The largest and best of the red *Nymphaeas*. Hybrid of American origin.

*N. RUBRA* is a beautiful red species, somewhat resembling *N. Devoniensis*, but the sepals are broader at the base and deeper in colour, the petals being less pointed. The leaves are rounded at the apex and mottled purplish on the reverse, otherwise the plant is similar to *Devoniensis*.

*N. RUBRO-ROSEA* in general characteristics resembles the preceding and is liable to be confused with it. The flower is much the same, but is larger and brighter in colour, with longer buds, and is more pointed.

*N. SMITHIANA*.—All the tropical Water Lilies delight in a high temperature, and if this one can be grown in a Victoria pond or in a temperature corresponding, the true character and chaste colouring will be very greatly developed. The flower is of medium size, perfectly cup-shaped, creamy white, with yellow stamens; petals broad and of great substance; the reverse or outer side of the petals is delicate pink. The higher the temperature the deeper and brighter the colour. American hybrid.

*N. STURTEVANTI*.—A superb variety with large, bright rosy-red flowers of massive proportions, petals broad and the flowers more cup-shaped. Requires a high temperature to develop its true character. Plants should be started early, as they

do not flower until well developed. A magnificent Water Lily and worthy of additional care to bring it to perfection. American hybrid.

IV.—THE VICTORIA (THE ROYAL WATER LILY) AND EURYALE.

**VICTORIA REGIA.**—This is the most wonderful of all water plants. It inhabits the tranquil bays and lakes of the great streams of South America. The plant is of gigantic proportions; the leaves grow to an immense size—from 6 feet to 7 feet across—with a vertical rim from 3 inches to 8 inches high. The flowers are from 12 inches to 15 inches in diameter, with very numerous petals. The colour of the flower is white on the first opening day, changing on the second day to rosy pink.

**V. REGIA VAR. RANDI** was discovered and introduced by Edward S. Rand, Jun., of Para, Brazil, and it differs from the original in several particulars. The whole plant is more robust; the young leaves are of a darker bronzy colour; the vertical rim on well-grown plants is 5 inches to 6 inches high, giving the plant a striking and novel appearance. Leaves are produced 6 feet to 7 feet in diameter. The flowers of this variety are white on the first day, changing on the second day to a deep crimson.

**VICTORIA REGIA** (Tricker's variety).—A new distinct Victoria with well-marked characteristics provisionally named as here given, but may be differently entitled on further knowledge. Among its peculiarities are: First, the early cupping of the leaves, the turned-up rim being shown by quite small plants; the full grown leaves are large, of a lustrous bright green colour, and the rim is from 6 inches to 8 inches deep. The flowers are also produced much earlier than on the other Victoria forms and are larger, measuring from 15 inches to 18 inches over; they are white on opening, changing to a lively rose-pink on the second day. The sepals in this variety are smooth, whereas the others are spinous to the tips; another striking characteristic is that it can be successfully grown in a much lower temperature than is usually advised for other Victorias. The seed will also germinate in a lower temperature; in fact, the plant does remarkably well treated precisely the same as the tropical *Nymphaeas*.

**EURYALE FERON** was the noblest aquatic in cultivation prior to the introduction of the Victoria; its large circular leaves are from 2 feet to 3 feet in diameter, with prominent spiny veins on the rich purple underside, the upper side being olive-green, puckered and spiny. Flower small and insignificant, of a deep violet-blue.

V.—NELUMBIUMS (EGYPTIAN AND JAPANESE LOTUS).

**NELUMBIUM ALBUM GRANDIFLORUM.**—A magnificent large white Lotus; its pure white flowers tower above the handsome foliage and contrast conspicuously against the carmine-pink of other *Nelumbiums*. Given the same soil as *Nymphaeas* and located in a warm, sheltered spot, and not moved too frequently, this plant will produce flowers in plenty.

**N. A. STRIATUM.**—A large and bold flower; petals white, tipped and striped rosy carmine; it is a vigorous and robust variety, and flowers very freely under liberal culture.

**N. LUTEUM**, the well-known American Lotus or Water Chinquapin, has flowers of pale yellow, though occasionally in stiff clayey soils the colour is as deep as in *Nymphaea Chromatella*. Plant but a moderate grower, and under artificial conditions should receive liberal treatment. Where established in natural ponds and lakes it is vigorous and free.

**N. ROSEUM.**—The flowers of this have the deepest colour of any Lotus in cultivation: in form they are more globular than others. Deep rose-pink. Plant vigorous and not as tall growing as in *N. speciosum*.

**N. SHIMOMAN.**—A Japanese Lotus of recent introduction; of robust growth, producing leaves and flowers of gigantic proportions. The leaves are from 36 inches to 40 inches across, supported on stout stems 5 feet to 6 feet high. The large

double white flower is a marvel of Nature's production. It is as free flowering as any single form and deserving of the best and most liberal cultivation.

**N. SPECIOSUM.**—The world-famed Egyptian Lotus now so well known throughout the United States, and as hardy and as easily grown as the native Water Lily, except, perhaps, in extreme northern sections. The flowers are rose-pink, creamy white at the base of the petals, but on first opening the flowers, or rather the buds, are a lovely shade of deep rose-pink; the flowers are not fully expanded till the second day, when they are in their best form. *Nelumbiums*, like *Nymphaeas*, are three-day flowers, but, unlike *Nymphaeas*, they only partially close at night.

**N. KERMESIANUM.**—A Japanese plant of great merit. The flowers are of a beautiful carmine-rose colour and satiny texture, of large size. Vigorous, free flowering, and early.

**N. SEIBAKUREN**, a pigmy among *Nelumbiums*, has leaves 6 inches to 8 inches across, on stalks about 1 foot in length. The flower is pure white, the long-pointed bud resembling a large Tulip. Can be grown in a small tub or large pot standing in water.

## ORCHARD AND FRUIT GARDEN.

### NOTES ON INDOOR PEACHES.

Now that the *Chrysanthemum* season, so far as the exhibition flowers are concerned, is past, the fruit grower's thoughts settle down on the preparation of his trees for another year's work, and where Peaches and Nectarines are represented in fairly large numbers, there is a deal of work to get through between the present and the early spring months. Almost invariably there are some trees that need attention at the roots from one cause or another. With me it is required in the suppression of strong growth that comes from deep root-action. This in some gardens is a source of a great deal of heavy labour, and tempts one to ask why roots of trees have such a tendency to ramble away from borders over which gardeners take so much trouble, and in which so many ingredients, natural and artificial, are incorporated. This tendency to ramble seems particularly strong where the subsoil is of a clayey nature, and, unless concrete bottoms are provided, I find it impossible to keep the roots from penetrating deeply. What the chemical constituents of clayey subsoils are I cannot state, but there seems to be an attraction in them for roots of fruit trees almost or quite as strong as that of leaf mould naturally deposited on the surface or placed there for their benefit. Possibly some of your readers may give some explanation relative to the attraction of subsoils for roots. Such soil brought nearer the surface does not have the same influence; indeed, roots would seem to avoid rather than utilise such a provision. In borders neglected both in the matter of moisture and surface mulching in summer, the natural conclusion would be that the roots penetrated deeply in search of moisture, but such an argument cannot hold good when the weekly routine of syringing and watering is rigorously carried out. It is only too true that the resultant strong growth from deep root action is fatal to regular and full crops, and the only alternative that remains for securing such desirable ends is to periodically examine and shorten the thong-like roots that are responsible for the vigorous shoots made during summer when left alone.

The value of lime refuse has been so often repeated by the many practical contributors to THE GARDEN, that it would seem almost

superfluous to further extol its virtues. Not one word has been advanced in favour of lime refuse that it does not deserve in the cultivation of stone fruits. I had a case in point lately when removing some fairly large Peach trees from one house to another. One had been planted two years since and a good quantity of lime had been used; the other had been planted mostly in new maiden loam without any addition; and while one had abundance of fibrous roots, the other had large fleshy ones rambling away in search of something the new loam did not contain. This is a proof of the value of lime for the production of fibrous roots, and in the maintenance of these, good crops of fine fruits follow when the daily routine is duly attended to. At this time of year there is a tendency to allow the fruit borders to become unhuly dry, and although this may not absolutely explain bud-dropping in spring, it no doubt accounts for some of it in many cases. A dry border in winter is entirely opposed to natural laws, although it would scarcely be prudent to follow up natural courses in the matter of watering indoor borders in winter. At the same time, a uniform state of moisture can be maintained without much effort in winter, and is certainly needed when one considers the short period in which trees are dormant between the fall of the leaf and the movement of the sap and buds in winter.

I have almost as great faith in the virtues of burnt refuse for fruit trees as lime, and invariably give a dressing to the surface in winter if there is no need for deeper excavations. In root treatment this is always mixed with the soil in the course of filling in. There is a distinct advantage in carrying out all planting and root-pruning of Peaches and Nectarines in the autumn or early winter. By early attention the trees invariably make some root growth, and this at once constitutes semi-establishment, which ensures a better prospect for the future. A light crop can often be taken the following year without any material disadvantage. On the other hand, by late winter planting the prospects of a crop are not a safe prediction, and the growth on trees hampered with the strain of fruit-bearing is not such as to raise very good hopes of a profitable one the following season. In the autumn of last year I had occasion to remove a large tree of Waterloo Peach from the early house, where it had ceased to be profitable for forcing, and was agreeably surprised in the spring to find it had retained and actually developed almost every flower-bud in the cooler house in which it had been planted. Its growth was so satisfactory that a light crop was retained in the course of disbudding, and its general condition at the present moment is such that very few would credit its recent removal. The same remark applies to a younger tree planted at the same time, and which also ripened some very excellent fruits.

For winter dressing most gardeners have their own favourite prescriptions, but, strange as it may seem, and with all the excellent insecticides now available, red spider and scale still remain. Scale seems to possess a remarkable trait of appearing in the winter, as if to justify the annual investment for the winter dressing. Flowers of sulphur play an important part in my preparation for scale, and I am convinced, from continuous observation, that if tree stems were coated with this in conjunction with other ingredients, scale would have a difficulty in eking out an existence. For red spider sulphur is an old and well-tried remedy.

In the pruning and training of Peach trees there seems a general tendency to retain more growth than is necessary for the production of

a full crop. Few gardeners can keep their trees so thinly trained that room for summer shoots is assured without any suspicion of

us hope they have not erred this time. At present the Muscat of Alexandria is the only really good late white

Grape, and this has several drawbacks. It is not easily or cheaply grown, more failing than succeeding with it. Premature shrivelling of the berries takes place in many vineries every season. Keeping well on the Vines or in a darkened room, it yet travels badly, one journey to the dining-room or a few hours' exposure in a shop window leading to discoloration of the berries. So much is this the case, that the majority of fruit salesmen and leading fruiterers usually advise growers with whom they are "in touch" to hold back their Muscats and supply them as orders are received. Those who can grow Muscat of Alexandria to perfection may rest assured that it is their own fault if high prices, or say 2s. 6d. to 4s. per lb., are not realised for the bulk. If, therefore, the latest novelty should prove a fairly good, easily grown, and a good keeping (after travelling long or short distances) substitute for the Muscat of Alexandria, market growers at any rate will fully appreciate the boon. If discarded by the fruit committee it would most probably have never had a good chance to come to the front. True enough, other white Grapes, several

that it is one of the best late black Grapes in cultivation. Lady Downe's is its only rival, and that stands but a poor chance against it till after mid-winter. "But what of the Ivy-like flavour noticeable in the berries of Gros Colman?" some of my readers will ask. My reply is to the effect that this wholly disappears after the Grapes are perfectly ripe. Without being actually richly flavoured, Gros Colman of which many tons are annually sent to Covent Garden alone—is when well ripened firm, luscious and agreeably flavoured, or just what meets the popular taste. The berries are not mere bags of sugar and water, as in the case of Alicante, nor so poor in flavour as Appley Towers and Alnwick Seedling, and for invalids they are fully equal to West's St. Peter's, not elojing the palate. In the case of well-ripened Gros Colman berries the skin breaks up and dissolves with the flesh, which I also consider a good quality.

Private gardeners will do well to pay little or no heed to any disparaging remarks that may be passed upon Gros Colman. If my experience is any criterion, no other Grape meets with greater approval at the dining-table, always provided it is presented in good form. It is very certain no other late variety is more easily grown or better repays for what trouble may be taken with it. If my advice is taken Alicante, Alnwick Seedling, the uncertain though richly flavoured, Mrs. Pince's Black Muscat, Gros Maroc, White Nice, Trebbiano and Golden Queen will be gradually weeded out, and also Gros Guillaume, Mrs. Pearson Lady Hutt, and any other late variety that fail:



House of Grape Lady Downe's.

crowding, and yet there is no need for this, for in selecting the fruits, the greater difficulty is usually found in reducing their numbers sufficiently for obtaining full size and quality in individual fruits. It must be said, however, that in spite of this there is no lack of good Peaches and Nectarines when the roots and borders are well attended to and red spider is rigorously suppressed by the daily syringing in summer. Except to old and exhausted trees, animal manures are best used only as a mulching, artificial preparations being much more preferable, and of these there is now an abundant choice. Liquid manure is very helpful to old trees when carrying heavy crops, as this reaches every root. Young trees planted in fresh soil should have clear water only. W. S.

Wills.

#### WINTER GRAPES.

Much that "A. D." has to say about different varieties of Grapes on page 396 is no doubt correct, and it certainly is to the point. I am not concerned to defend the action of the fruit committee of the Royal Horticultural Society. In all probability the majority of the members of the committee are anxious that a good white late-keeping Grape should be found, and welcomed the latest candidate for distinction accordingly. Their action partakes more or less of the character of a leap in the dark, but let

of which "A. D." mentions, have been brought forward and distributed with a flourish of trumpets, only to disappoint. The nearest approach to a rival to the Muscat of Alexandria I have yet tried is Golden Queen. As easily grown as the Black Alicante, this variety has only one fault—the muddy appearance of the berries when ripe—and that simply places it "out of the running."

Without condemning the idea that a trial of new Grapes should be held at Chiswick, I would yet point out that even that would not afford conclusive proof of the merits or demerits of the varieties tried. Soils, houses, and positions all have a marked effect upon different varieties, and what might be deemed a failure at Chiswick would probably enough under different circumstances be considered a success. For instance, "A. D." says Gros Colman is a tolerated Grape because of the size of its berries and the weight per rod it produces to the market grower. On the score of flavour it ranks amongst the lowest." In his estimation it may do, but I hold exactly the opposite views, and am prepared to prove



Grape Muscat of Alexandria.

to come up to expectations, their places being assigned to Gros Colman and the longer-keeping, invaluable Lady Downe's. A rich border is not required for either of these two varieties. Mine is on the poor side, and they have done remarkably well in it up till now. It can be

ade richer when the Vines show signs of requiring more assistance in the way of manure. Muscat of Alexandria may share a house or buses with these two black varieties, and if all be started early or not later than the first week in March—a fortnight earlier from choice—all will be well advanced in colouring in August. Where so many err is in retarding instead of rewarding their late Grapes, and also in being sparing of fire-heat during dull weather in June, July, and August. My Gros Colman not uneventfully commences colouring late in July, and this I hold to be a distinct advantage. It is abundance of warm air that grapes require to bring them to perfection, and this they can have when the ripening takes place, principally before September. Muscats succeed remarkably well under this treatment, but if these are studied most, receiving much fire-heat and fresh air in comparatively small quantities, then the Gros Colman berries will never colour beyond a “foxy d.”

Late ripening not only militates against the quality of any variety of Grape, but it is also prejudicial to long keeping. I have had bunches of Lady Downe's fresh and plump in June, Gros Colman in a presentable condition in March, Alicante and Muscats to much about the same time, all cut from Vines that had commenced growth early in March. They might possibly have kept longer, but only Lady Downe's had an opportunity of hanging in the fruit room late by way of experiment. Plenty of time should be allowed for colouring and abundance of air admitted while it is going on. This may mean a slight falling off in the size of berries, but if some of the writers who have recently expressed their views on Grapes are to be believed, great size of berry is not particularly desirable in Grapes. I was under the impression size of berry was a point seldom overlooked on the dining-table, in the exhibition hut, or in the open market.

W. IGGULDEN.

**Pear Josephine de Malines.**—This, one of the most delicious Pears, keeps for any length of time, is a very sure cropper, and not at all stitious as to soil or situation. I find it makes splendid bush tree, and carries a good even crop of serviceable-sized fruit almost every year. I have never yet been able to keep it so late as it is set down in fruit catalogues, where it is usually classed with the very late sorts. With me it is usually at its best about Christmas. Possibly a well-drained warm soil may have something to do with its early maturity, as many other kinds classed as late are ripe long before their usually accepted date. For instance, Easter Beurré is with me a Christmas rather than an Easter sort.—J. G., *Esport.*

**The advantage of netting fruit trees.**—The sale by auction of the Grapes on the famous *Veille du Roi* (King's trellis) in the garden of the Château de Fontainebleau has this year produced the sum of 3583 francs (£143 6s.), far exceeding the return of last year, which amounted to 870 francs (£34 16s. 8d.). The 30,000 bunches of Grapes gathered this year were put up in 137 casks, each weighing from 55 lbs. to 66 lbs. This result was more or less owing to the special attention which the new head gardener, M. Guthier, had bestowed on the trellis this year in protecting the fruit from wasps and sparrows by means of a netting particularly adapted for that purpose.—*Revue Horticole.*

**Peach Tardive du Mont d'Or.**—On November 9 of last year I received from M. Franque Morel, nurseryman, of Lyons, a splendid peach under the name of Tardive du Mont d'Or. Mont d'Or is the name of a group of hills situated on the right bank of the Saône about six miles from Lyons, and the name of the Peach in

question has nothing to do with Mont Dore, in Auvergne. M. Morel's Peach was appreciably later in ripening than the Salway or even the Belle de Saint Geslin Peach and its white-skinned variety. The quality of the fruit is in keeping with its fine appearance. Very often at this time of the year, when the sun's heat has declined, fruit is deficient in sugar and the juice is somewhat insipid, but I am glad to say that the Tardive du Mont d'Or Peach preserved its high flavour and true Peach aroma. The tree is vigorous-growing, with erect spreading branches and large leaves. The fruit is large or very large, of a depressed-globular shape, over 3 inches in height and nearly 4 inches in width, deep red on the side exposed to the sun, and yellow tinged with red on the shaded side. The flesh is creamy-white streaked with pink at the centre, very juicy, sugary, and perfumed. It ripens in the beginning of November, sometimes as late as November 15. This variety, which was raised at St. Didier au Mont d'Or, will fully deserve the reputation which it is sure to obtain when it is better known in collections and walls are furnished with its fine-flavoured late-ripening fruit.—Ed. ANDRÉ, in *Revue Hortico.*

#### FIG CULTURE.

Figs are in greater demand now than used to be the case some twenty or more years ago. In many establishments at that time the only attempt made in cultivating the Fig tree was outdoors against walls. In some instances, or in favoured parts of the country, this outdoor culture still obtains and yields good returns. In less favoured districts the crop is such a precarious one that Fig culture hardly pays for the time and labour involved. In places where the Fig is greatly appreciated, this latter cause has been one of the prime factors in its being grown so much more extensively under glass. Figs have, of course, been grown under glass for a long time past, but for every house which existed at the time quoted above, the number has now increased tenfold. The reason for this is not far to seek. In addition to the Fig making variety in the dessert at any time when in season—which fact alone creates a great demand—it is now more largely partaken of than used to be the case, especially by people who have lived abroad. Its wholesomeness as an article of diet is a well recognised fact, and in addition to its being served at dinner, it often has to appear on the breakfast table as well.

Although much more grown than formerly there are still some very erroneous ideas as to the correct method of cultivating the Fig. Some people run away with the idea that the Fig cannot be grown unless subjected to great heat, and that it requires a deep, rich border to root in. To all who put these queries to me, and they are many in the course of the year, my answer is always to this effect. Give Figs a poor soil to grow in, confine the roots either to narrow borders or in brick pits, and with regard to the application of heat, this depends entirely on the time that the fruits are required to be ripe, as no heat is needed at all if they are not wanted until the end of the summer or in the autumn. Heat is, as is well known, an essential if the trees are to be forced, but when the produce is not required until the middle of July and from then onwards, Figs can be grown without its aid. With the assistance of heat, two crops of fruit can be secured from the same trees in one year; without it, one only, but that a very heavy and excellent one. It is a well-known fact that the best results are obtained from pot trees if very early fruits are wanted. These trees should be well established, and if they are pot bound so much the better, as they are not so liable to cast their fruits when subjected to

heat. Very often two crops are taken from these pot trees before they are turned outdoors to rest, to prepare them for the ordeal of forcing the following winter. Suitable varieties for this purpose are White Marseilles, Brown Turkey, Osborn's Prolific, St. John's, and Black Ischia. To succeed there it is usual to start a house of planted-out trees either in January or February, and in not a few instances where accommodation cannot be found for pot trees, this is really the first house. In this case the number of varieties is but limited, very often consisting of only one, and that the Brown Turkey. All the same, these trees under skilful management give excellent returns in the shape of good crops of fruit in the spring months, which are always greatly appreciated, particularly during the London season. The time for starting in both the above-mentioned cases of course depends upon the time the fruits are required, but as a rule it is generally about the middle of November or beginning of December. Where forest-tree leaves are plentiful they play an important part in Fig forcing, as when mixed with a little manure they give off a genial warmth and obviate the necessity of employing much fire-heat in the initial stages of forcing. If the one house is started to succeed the other as indicated, these two houses of trees will keep up the supply until midsummer. By the time the last of the fruits on the pot trees are gathered, those on the permanent trees in the second house will be fast approaching maturity, if not actually ripe. In any case there would be but a few days' break in the supply. If the second crop is to be taken the houses are closed so soon as the last fruits of the first crop are gathered. They are then subjected to a high, moist temperature and are abundantly syringed. Under these conditions the fruits swell rapidly, and although not so fine in point of size, they are always very luscious when ripe, and much sought after. If not necessary to have the fruit ripe so early in the year, the starting of the pot trees may be deferred until the beginning of January. The next house need not then be closed before the first week in February, and if there is another house which can be started about the middle of March, there will be a constant succession of fruit right through the season, as two crops of fruit can be taken in all three cases. Very little heat would be required for the third house, and as soon as June is reached it could be dispensed with altogether. The fact of closing early with plenty of solar heat would prevent the temperature from falling too low at night. The fruits would ripen on the trees in this third house about July or the beginning of August, according to locality and aspect, and the second crop about the end of September or second week in October. With careful ventilation and by insisting on the atmosphere being kept dry, this latter crop will ripen gradually and prove invaluable at that season. If the house is but a cold one, only one crop of fruit could be expected, but this would be a very heavy one, and with care the supply would last for several weeks.

#### COLD HOUSES

should never be closed until the last minute, as it were, as it is usual to have the fruits mature in these as late in the season as possible. When the point buds begin to break is quite soon enough, and even then there should not be the slightest semblance of forcing. The house should be freely aired during the early part of the day, but may be closed about 4 p.m., when the trees may be given a refresher in the shape of a syringing. The ventilators should be opened again at 6 p.m., if not widely, sufficiently to allow of a free circulation of air throughout the

night, and by adhering to this course of treatment magnificent fruits may be grown at little trouble and expense. On wet days and chilly evenings or nights the ventilators are best closed, but beyond this afford the trees all the air possible. For cool house culture nothing will equal Brown Turkey and Negro Largo as far as varieties are concerned, and if the roots are kept restricted, they can be depended on to give excellent results. In some instances the late crop is obtained entirely from pot trees which are grown as cool as possible right through the season. To anyone having a large house or the space at command, this would afford an excellent opportunity for growing and testing the different varieties of the Fig. In addition to the varieties already quoted, the latter may be added for this purpose: *Violette Sepor*, *Singleton*, *Brunswick*, *Bourjassotte Grise*, and *Grosse Verte*. Anyone requiring a more extended list than this could not do better than visit the Royal Horticultural Gardens at Chiswick and inspect the fine collection grown there. This collection is a most complete one, and all varieties worthy of cultivation are included in it.

A. W.

**Apple Reinette du Canada.**—I noticed some very fine examples of this variety recently at Livermere Park, these having the characteristic cone shape and russet appearance on the sunny side that stamp it as so distinct from most other large Apples. It is not, perhaps, quite in season yet, but the fruit keeps at least four months into the new year, when its value for cooking is great. It is fit for use perhaps as long as any known kind, and bears well under any form of training. A warm position suits it best, as unless the fruit is well ripened before being gathered it is apt to shrivel.—R.

**Apple Lane's Prince Albert.**—This is one of the very best cooking Apples, and appears to have given a good account of itself everywhere during this season of scarcity. So free-bearing is it in most places, that somewhat heavy thinning has to be resorted to. The tree is not a very vigorous grower in many places, and it is one of the few kinds I have seen doing well under the espalier system. Free, open bushes or standards give better results, and such require practically no pruning. Not only is it an excellent cooking fruit, but if kept until the new year there are many dessert kinds that do not equal it for this purpose, the flesh being melting, juicy, and of a brisk and pleasant flavour.—H.

**Strawberry Royal Sovereign.**—I have not seen any reference in the many reports of Strawberries that have appeared of late to the hardness or otherwise of this popular variety, but I could not help being struck with the damaged foliage after the spring frosts of the present year. From the same cause most of the flowers of this variety were destroyed, as were others open at the same time, but I noticed, particularly in my neighbours' gardens as well as my own, that Royal Sovereign was not so hardy as some others, neither in yearling nor older plants. Latest of All, on the other hand, escaped unhurt both in foliage and flower, and gave much the best crop of the year.—W. S., *Wills*.

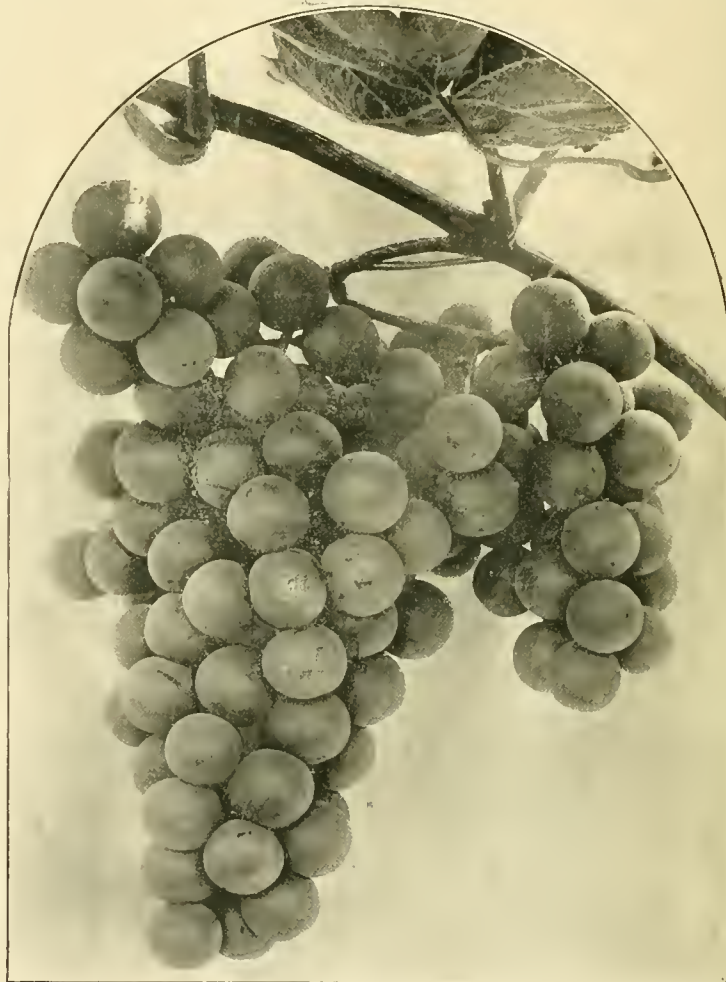
**Highly-coloured Apples.**—"Visitor" (page 396) expresses surprise at the high colour of dessert Apples at Livermere, and suggests that as the soil is light and porous it is not the best for Apples. From my own observations, it is in light sandy or gravelly soils that the most highly-coloured fruits are produced, although there are exceptions in this as in everything else connected with gardening. A great deal depends on the treatment of the trees and their roots. Some wonderfully fine-coloured fruits have been shown this autumn, both Apples and Pears. At the late Bristol Chrysanthemum show the classes for Apples were keenly contested, as many as a dozen

staging collections of six and four dishes. One particularly good Apple I noticed at Bristol was Hubbard's Pearmain, a variety I had not previously seen shown. There were also very finely-coloured Ribston, Blenheim, Cox's Orange, and other standard sorts.—W. S.

#### PRUNING AND NAILING FRUIT TREES.

WITH the beautiful weather we have been experiencing of late, it has been possible to make good headway with this work, for though mild, it has been dry both to the feet and overhead. Many gardeners commence to prune and nail trees on south and east walls, leaving those on the north walls till last. This, in my opinion, is a mistake, for those trees on warm aspects that are nailed and pruned early com-

bright sunshine in early spring after a frosty night or a sharp frost follows a bright day, the sap, being active, gets frozen and causes a check. This, no doubt, is in great measure the cause of Apricots growing against south walls doing so badly in the southern counties. If these were left unnailed till late in the season they would doubtless considerably retard in their growth. I commence on the Morello Cherries, and follow with all the trees on north walls. Those western aspects are next done, then those to the east, leaving the south walls till last. Morello Cherries have been taken in hand during the late mild weather the work will have been done with more comfort and in much less time than when deferred till cold, fro weather sets in. The walls, too, can



Grape Gros Colman. (See p. 448.)

mence to grow too soon, while those on the north are retarded. To show that this is so, you have only to hang a thermometer against them to determine this. Last Friday (November 19) the sun shone bright in this district, so much so that it was uncomfortably warm standing against a south wall. I fetched a thermometer and hung it against the wall. To my great astonishment the heat registered was 96°; at the same time one in the shade registered only 52°. It will be seen from this that the walls get warm, and as the heat is absorbed they will retain it for some time, giving it off later in the day when the sun has declined. Here, then, is the cause of so much mischief from early nailing on these walls. We often experience these bursts of

cleansed more effectually than when they are frozen. One of the great secrets in the successful cultivation of this fruit is to rid the trees of all insect pests during the winter, and this can readily be done as soon as the leaves have fallen. It should be the practice to unnailed and liberate all growths every second year. Half be done each autumn the task will not be so great as when all are left to be done at once. When liberated the walls should be washed with strong soft-soap water to which a little sulphur has been added. New shreds should be used which should be cut as narrow as possible. Stout branches should be fastened to the wall with pieces of golden willows, as these are much neater than shreds, and not so liable to cut in

wood as tarred twine. It is not well to over-crowd the shoots, as the trees would not be able to support all the fruit that is set. Where trees are not liberated the walls should be thoroughly syringed with soft-soap water after the work is completed. Plums on north walls should receive attention, the wood being washed and made clean. All dead spurs should be removed and others cut back to two or three eyes. Where trees receive due attention during the summer months, and the ground is light there will not be over-much growth to remove, but if neglected and the soil is stiff, strong growths will have been made which are by no means the most useful. Having completed the Plums, attention should next be directed to Peas. Trees should be freed from scale and other pests, every shoot being examined to make sure that the shreds or ties are not defective for when the fruit is approaching maturity this is very annoying to find that some of the branches are broken down by its weight. By the time such trees are nailed the winter will be being advanced, so that it will be safe to prune and nail Cherries on the various aspects. These may be followed by the Apricots, and finally Peaches may be taken in hand. The advantages of leaving these till the last are manifold. Not amongst the least is the retarding of the blooming period by keeping them from the warm walls as previously noticed. Pruning then forms an important part in the successful cultivation of fruit, in the south at least, and those who make close observations of fruit and seasons will be able to note the difference between the growth of trees that are pruned early and those that are left loose till late in the season. H. C. P.

BOOKS.

THE WATER GARDEN.\*

The very words of the very interesting theme of this book suggest that people are waking up to better ideas than the old ones of the pattern garden and its stereotyped monotony. Mr. Tricker's book is devoted to the cultivation of the more beautiful kinds of aquatic plants, the warm sun of America enabling growers not only to have the hardy kinds in perfection, but also to grow in the cool air with a little extra care many Water Lilies which in our country and Europe generally are commonly seen only in hot-pots. Mr. Tricker's book deals with soils, planting, hybridisation, propagation, destruction of plants by insects, heat, plants out of doors, &c., and describes the kinds also and the plants that go best with aquatic flowers, such as Papyrus, Grasses, Ferns, and also perennial and ever hardy shrubs. His work is very well done, and the book generally is attractive, although we rather object to process cuts with coal-black backgrounds, often showing the distant parts stronger than the foregrounds. The clayed paper and the binding are not quite worthy of the subject; but on the whole we feel grateful to Mr. Tricker for his work. A great advantage of the American climate is the power of growing the beautiful Lotus, or Sacred Bean, not possible in the open air in our country. So far as we have tried even the supposed hardy varieties, it is a total failure from the want of heat. The cut of this is a very bad example of process work. There is an interesting feature in the varieties of Vic-

toria Lily, of which there are two pictures, disfigured, however, by the blackness of the backgrounds, which surely cannot be necessary even in a process cut. The instructions for making artificial ponds are full and useful, though of course all these things are subsidiary to taking advantage of the natural water which occurs in so many parts of our country, and almost all northern countries, in the shape of backwaters of streams, lakelets, and ponds. A very pretty and well-figured Water Lily is gracilis, although unhappily tender.

A descriptive list of Water Lilies, with cultural memoranda extracted from Mr. Tricker's book, will be found on page 444 of this issue.

KITCHEN GARDEN.

YELLOW TOMATOES.

YELLOW-FRUITED Tomatoes are certainly unpopular. Why this should be the case is difficult to determine. I can quite understand why they were so little cared for in former years, or when the old Large Yellow was the only variety of its colour generally available, but during the past twelve years a great improvement has been effected among yellow as well as red-fruited varieties, and the best of the yellows equal in point of flavour those of any other colour. Some people maintain that certain yellow-fruited Tomatoes are more delicately flavoured than the red ones, and readily admit them as dessert fruit. "Give a dog a bad name and hang him" is, however, an old truism that may safely be applied to yellow Tomatoes. I blame the coarse, soft, flavourless Large Yellow for all the distrust with which yellow Tomatoes are still regarded by the general public. As far as market growers are concerned, they must still stick to bright red Tomatoes. Foreign fruit has quite spoiled the mass of people who regard Tomatoes as an important part of their diet during about five months in the year for pink or cornelian-red Tomatoes, and as a consequence they are not grown other than in private gardens. All the same, two of the best flavoured and otherwise good pink sorts, when gathered from plants growing against garden walls, are Dedham Favourite and the large-fruited Mikado. Not one purchaser in a hundred has had an opportunity of tasting a good yellow Tomato. Amateurs who grow Tomatoes for home consumption and many private gardeners ought to be able to say a good word for yellow fruit. If yellow Tomatoes are ever popular, it will be owing to their exertions. The revolution will not be brought about by growers for sale, simply because their own private opinions have always to be subordinated to the public taste, against which they cannot afford to run.

During the present year I gave most of the best yellow Tomatoes a fair trial with a view to being able to express an impartial opinion of their merits, and if possible to popularise them in this part of the country at any rate. The plants were raised in March and got into their fruiting quarters in a heated lean-to house before they became stunted in growth. They were placed in 11-inch pots arranged each side of the house on a border, and allowed to root out into the latter. A distance of 15 inches apart was allowed each plant, and all were confined to single stems, these being trained straight up the roof, meeting at the ridge. By this it will be seen that a perfectly fair trial was conducted (twenty plants of each variety were grown), the conditions generally being favourable to the production of a heavy crop of fruits

Some varieties were disappointing and will not be grown again, unless it can be proved by other growers that I have arrived at a wrong conclusion as to their merits. In Sutton's Prince of Wales we have an ideal dessert Tomato. It is of a free yet woody disease-resisting growth, and produces a heavy crop of comparatively small, smooth, round fruit, rich orange-yellow in colour, and of a brisk yet delicate flavour that found favour with all lovers of Tomatoes I gave fruit to. Plants of this variety covering the roof and closely cropped with clusters of ripe and ripening fruit are most ornamental and attractive and worth growing on that account alone. Golden Perfection is the other variety singled out for special mention. Golden Sunrise, which I received from America before it was offered in this country, I regard as nearly or quite identical with Golden Perfection, and it succeeded admirably with me both under glass and in the open. This type of Tomato may be briefly described as a yellow form of Perfection. It is of the same robust habit of growth, good crops set, especially if fertilisation is resorted to daily while the flowering period lasts, and if the precaution is taken to early remove the large malformed flower that shows on each strong bunch of bloom, the rest of the blooms will be followed by moderately large, handsome fruit that would be very hard to beat if competing in any class for yellow Tomatoes. It is not on account of its handsome appearance alone that I recommend Golden Perfection, but the quality is also first-rate, rivalling, if not surpassing, that of the best-ripened fruit of Red Perfection. For flavour, Carter's Green Gage is yet hard to surpass, but the fruit does not set freely, and in other respects I prefer the Prince of Wales. Two named Golden Queen were grown, one producing medium-sized, smooth round fruit rich yellow in colour, the flesh firm and of moderately good quality, and the other gave both corrugated and nearly smooth round fruit, pale yellow in colour, flesh soft and wanting in acidity. Neither form cropped satisfactorily, and I cannot recommend them. Blenheim Orange, a variety that has done well in previous trials both under glass and in the open, was not a success this time; the crops were too light. Selected fruits, rich yellow with a tinge of pink colour where most exposed, form a very handsome dish, and not much fault can be found with the quality. I wish the latter remark could be applied to Sutton's Sunbeam. This novelty set heavy crops of fruit each about the size and form of a Victoria Plum. The colour is a clear pale yellow and the fruit attractive in appearance, but with me the quality was most disappointing. What it would be like if the fruit were ripened in the open air I am unable to say. Under glass it was bad. Nor does my opinion of the merits of Golden Nugget agree with that expressed in various other quarters. In spite of the certificate of the fruit committee of the Royal Horticultural Society and the favourable comments in the horticultural press, I maintain that Golden Nugget is a greatly over-rated variety. No fault can be found with its habit of growth or cropping, and the numerous racemes of small, richly coloured fruit are most ornamental, but the quality with me was of the poorest. Very few that I gave fruit to cared for a second helping. My treatment may be at fault, but Golden Nugget was arranged next to Prince of Wales, the variety that did so well with me.

So much for the trial of yellow Tomatoes. I question the wisdom of certificating a novelty

\* "The Water Garden." By Wm. Tricker. (D. Appleton and Company, Limited, New York.)

shown at the Temple show and earlier. Very solid fruit, as in the case of Golden Sunbeam, I object to, nor do I care for any "with few seeds," as that, instead of being a recommendation, goes to prove that a maximum of core is most undesirable. Seeds may be thought objectionable, but it is the pulp surrounding the seeds and not the solid core that gives character to the fruit. Soft, flabby fruits, however, are not wanted, as these travel and keep badly.

W. IGGULDEN.

**Onions.**—I am sure many will agree with "A. D." (p. 406) that we should grow sufficient Onions for our own needs without importing them from the Continent. When visiting recently a popular watering-place in the south I noticed no less than four foreigners with these roots, taking the town in sections in a leisurely manner. I at once ascertained the price of Onions in shops and found them just three times as much as one would expect, thus giving every encouragement to the foreigner. On the other hand, growers do not get much encouragement, as last spring, after storing till March, the price obtained for large quantities was very poor. I do not think it is a matter of cultivation, but rather distribution, as when huge quantities are consigned to the salesman, producers are at his mercy. I admit Onions sell well, or better, after a severe winter when vegetables are scarce. I know last spring many never were sent to market owing to the carriage being great and the returns so poor.—GROWER.

**White Jerusalem Artichoke.**—I am sorry to see (p. 406) Mr. Tallack notes the prevalence of disease among the white Artichokes. This is to be regretted, as the white is so much more shapely than the older kind and of better quality. I have this year grown a goodly number of the white variety, and found no disease of any kind. Owing to drought the tubers are not so large as one could wish, but quite large enough, as with the white variety there is less waste in preparation. It will be interesting to know if others have suffered like Mr. Tallack. Mr. Tallack does not mention what variety he grew. I know three distinct white kinds, and they differ greatly in quality, in appearance also. One, an elongated root, is a grand vegetable. Last season I had roots each 9 inches to 12 inches in length, and they are only a little less this year. I prefer the shorter ones, as these are best for table. This variety I had from the Continent, and like it very much, as it is very smooth and even.—G. WYTHES.

**Tomatoes and fog in winter.**—Few plants suffer sooner than Tomatoes during foggy weather, and in the metropolitan area we have this year had fogs earlier than usual, and, unfortunately, of longer duration. Many would think a little extra heat would counteract the fog. Not so; it only makes matters worse. I find it best to keep the plants as cool as possible, and by so doing lose less bloom. With heat the foliage suffers so much, that the fruits at times will drop also and the crop is lost. Young plants that were in bloom and have lost the crop owing to the fog will, with a little coaxing, next February give a good return and set freely, so that there is a great gain in growing winter Tomatoes, as no matter how much attention may be given seedlings raised at the end of the year, they are rarely strong enough to fruit till April is well advanced, often much later. For some years I have gone into the question of winter fruiting, and in the end the gains balance the losses, as the plants, though crippled now, soon recover as soon as the days begin to lengthen. I find the best fruiterers are plants grown in not too large pots. I have also found seedlings stand the dark weather much better than plants raised from cuttings, which I find soon succumb. In more favoured localities much better plants may be grown and fog will not be felt. I am sure the plants soon repay the cultivator when they can be kept healthy all the winter, as Tomatoes early in the spring command

a good price, and they continue to fruit if not too crowded or neglected in any way.—G. WYTHES.

**Beetroot in winter.**—These roots, often lifted early in October and stored in dry soil, grow out badly early in the new year and lose quality. I am aware the advice is frequently given to store the roots early to prevent frost doing damage, but from close observation I find worse results follow from early lifting than from frost. I admit very severe frost, such as we experienced three winters ago, would spoil the roots if they were large and exposed above the soil, but not if they were covered with earth. Late-sown roots are not so likely to be far out of the soil as those sown early. Even when sown late in rich soil some kinds come coarse, and it is well to avoid sowing in such land if the roots are required for keeping. Few roots are so unpalatable as coarse Beet, and for winter and spring supplies I have found May or even June sowings the best, as then there is no difficulty in keeping the roots till May if they are kept cool and frequently moved to prevent growing. They may with advantage be placed under trees or a north wall if the store is warm in gardens where the soil makes storing a necessity. Beet is not so tender as many think. For years, having a special variety, I left a few roots in the open for seed and they wintered well, the only protection being earth drawn well over the crowns. This led me to adopt the same plan with roots for use. There was never any difficulty about colour or quality when cooked, as wintered thus they did grandly. I have often stored Beet in the same way as Potatoes, in a clamp, and the roots were not given extra cover in severe weather, and so far turned out well.—G. W.

#### AMERICAN NOTES.

[From *Garden and Forest*.]

**THUJA Plicata.**—The plants commonly cultivated under the name of *Thuja plicata* are garden forms of our eastern *Arbor-vitæ*, and must not be confounded with the *Thuja plicata* of Don, which is more frequently known as *Thuja gigantea*, although Dr. Masters has recently clearly shown that *Thuja plicata* is the older name. This is the *Arbor-vitæ* of North-western America, the Red Cedar of Oregon and Washington, the greatest of all the *Thujas*, and a veritable giant among conifers. Near the shores of Puget Sound it is a common occurrence to see this tree 200 feet high with a massive trunk gradually tapering from a base 15 feet or 16 feet in diameter. As it grows in its native forests it is one of the most beautiful and graceful of the American conifers, with bright cinnamon-red bark and a narrow spire of branches, which sweep out gracefully from the stem, and are clothed with great Fern-like, pendulous, yellow-green branchlets. Nowhere forming pure forests, the western *Arbor-vitæ* grows singly or in small groves generally on low, moist bottom-lands or near the banks of streams, and less commonly on dry ridges and mountain slopes, which it sometimes ascends in the interior to considerable elevations, although it is only at the sea-level and under the immediate influence of the ocean that it grows to its greatest perfection. Ranging along the coast from Southern Alaska to Northern California, it penetrates also eastward along the banks of mountain streams through Southern British Columbia and Washington to the western slopes of the northern Rocky Mountains, and is abundant on the Bitter Root and Cœur d'Alene ranges and in the territory north of Flat Head Lake. Plants obtained several years ago from this interior and comparatively dry region have proved hardy in the Arnold Arboretum and in Mr. Hunnewell's pinetum, where they are now growing rapidly, and promise to become large and handsome trees.

**THUJOPSIS** chiefly differs from *Thuja*, which some authors unite it, while others sider it a *Cupressus*, in its ligneous cones much thickened and dilated at the apex, bearing five seeds. The only species, *Thuja dolabrata*, which is one of the most beautiful conifers of Japan, is easily recognised by broad coriaceous leaves, which are bright green above and silvery white below, and arranged in four ranks in opposite pairs, those on the upper and under side of the branchlets being closely appressed against the stem, while the lower leaves are more or less spreading. In Central Hondo this tree is common between 5000 and 6000 feet above the sea-level, growing as an under-shrub in the dense shade of Hemlock forests, and every year buried in snow for four or five months. Sometimes it rises, however, when its crown reaches the light, to a height of 40 feet or 50 feet, with a slender trunk covered with bright red bark, long, gracefully drooping branches and a narrow pyramidal form. It evidently requires shade and protection at least while young, and in its native forests the largest plants are surrounded and overtopped by taller trees.

**WISTARIA MULTIFLORA.**—This differs from ordinary *Wistaria chinensis* in its narrow leaflets, much longer and looser racemes of fragrant flowers and in their lateness, as flowers of this plant open two or three weeks later than those of *Wistaria chinensis*. In autumn the two species can be readily distinguished, as the leaves of *Wistaria multiflora* turn clear yellow comparatively early, while those of *Wistaria chinensis* remain green late that they are almost invariably destroyed by frost before changing colour. *Wistaria chinensis* is a common Japanese forest plant and is also a native of China. *Wistaria multiflora* does not appear to be indigenous in Japan, judging from the fact that it is a hardier than *Wistaria chinensis*, it probably came originally from Northern China. Whatever the right name for this handsome plant may be, it is evidently in every way distinct from the common Japanese *Wistaria* the plant universally cultivated in this country and Europe as *Wistaria chinensis*.

**PRUNUS SUBHIRTELLA** is a Japanese *Chamaecyparis* which promises to become a valuable ornamental plant in our northern gardens. Like *Prunus pendula*, which it resembles also in the structure and size of the flowers, it blooms before the appearance of the leaves. In the Arnold Arboretum, where *Prunus subhirtella* proved hardy and flowered abundantly for last two or three years, it is now a broad bush with slender, erect branches and dark green leaves from 2 inches to 3 inches in length. About the first of November these turn a rich purple-red, making this plant a beautiful object at this season of the year. Altogether *Prunus subhirtella* is one of the hardiest and most promising of the small trees recently introduced into our gardens.

**PYRUS NIGRA** and **PYRUS ARBUTIFOLIA** both good garden shrubs. At this season of the year, when the former has already shed its leaves, and its fruit, although still hanging on the branches, is much shrunken, *pyrus arbutifolia* is the more attractive plant. It is a tall, slender bush bearing abundant white flowers, which open about June 1st, and small fruits which do not ripen until the end of October, when they become bright scarlet and remain on the branches without loss of colour or brilliancy until well into the winter. The leaves turn dark red about the time the fruit becomes ripe, and at this season this is one of the most attractive of our native shrubs.

It is not so good as in some others, but, in spite of this drawback, *Pyrus arbutifolia* may well find a place in any garden for the beauty of its autumn colours and the winter effects produced by its fruits.

## NOTES OF THE WEEK.

**Chrysanthemum Western King.**—At the meeting of the Royal Horticultural Society this, now well-known variety, was shown in plenty, the blossoms, though only of medium size, being well proportioned and very pure and compact.

**Grigeron speciosus.**—This is one of the very best perennials in the open that continue to give a few flowers. The growth made by this species this year in good garden soil has been really remarkable, and, as is natural where the growth is abundant, the flowers appear also in great profusion.

**Epacris carminata.**—This is a very brilliant shrub for winter flowering, producing long sprays of blossoms, the latter individually being nearly as long as the flowers of *E. miniata*. The brilliant carmine tinge with its white tip renders the above variety more than usually attractive just now.

**Coprosma Baueriana variegata.**—This pretty shrub is very useful in the cool conservatory or winter garden, where it will readily create a pretty result by reason of its variegated foliage. In these positions very little moisture will be required, the plants quickly shedding their leaves if over-watered.

**Iris alata (Scorpion Iris).**—Mr. Wilson sends us from his garden at Wisley a very fine form of this Iris, which flowered in the open border. The flowers of this variety are of a deep azure blue, and will be found very useful in the cold house. A snug nook in the rock garden would suit it, or it may be grown in shallow pans in a cold frame.

**Choisya ternata.**—This beautiful evergreen is flowering on a wall at the present time, where a fine plant spreads out over many feet, the pure white blossoms appearing now and then among the pleasing foliage. A wall with a south or south-west aspect suits it well, while occasionally it is seen in capital form on a north wall.

**Rhododendron Maiden's Bush.**—By reason of its free-flowering qualities this should constitute a really good companion for *R. Princess Alexandra*, and as both kinds flower at the same time a certain variety is afforded by the varying shades in the two kinds, the one now referred to being of a bush-pink with white.

**Galanthus octobrensis.**—A little cluster of this interesting plant is bearing a few blossoms in the rock garden at Kew, though the tuft appears to gain little either in stature or the number of its leaves at this time. A more vigorous variety would certainly be most welcome at this time, when flowering plants are so very rare in the open garden.

**Impatiens rubro-cerulea.**—This very attractive water-flowering climber is now in bloom in the warm conservatory at Kew adjoining the Victoria house. The blossoms, which are some 3 inches across, are of a lovely deep sky-blue and very striking, while the older flowers assume a reddish tinge at the margin. In its early stages the flower is indeed beautiful.

**Verine Manselli** is certainly one of the most brilliant of these autumn-flowering bulbous plants. The colour, which is a brilliant carmine, is singularly effective with so few plants in flower, and the spikes, sending well out on nearly 2 feet of stem, are especially valuable for cutting. It is surprising how long the buds of flowers remain in good condition in a cool, fully-ventilated house.

**Leleborus orientalis.**—The long-continued spell of mild weather has started this to flower, the spikes being at the end of November more than 6 inches high. The old foliage is in capital form this year, owing possibly to the limited rainfall and the absence of cold nights. In their present stage, however, the flowers would suffer considerably should a heavy fall of snow come upon them.

**Hyacinthus grandiflorus.**—In the open and fully exposed, plants of this species vary considerably in growth and subsequent flowering. Fully a month ago I noted it in full beauty, but this was an instance of an established plant. Last week, however, we observed some plants that had been put out in the

spring of the present year only just opening their flowers—too late to be of much service this season.

**The Strawberry Tree (Arbutus Unedo).**—I am surprised to read in issue of November 27 that this is perfectly hardy. Of course it is in favoured parts of the country, but here, in the Cambridge Botanic Garden, it has been repeatedly killed. This morning (Dec. 1) I have been interested to learn that at Baltham, a few miles from here, at about 350 feet elevation, it is fruiting profusely.—R. J. LYNCH.

**Chrysanthemum Sam Caawell.**—This belongs to a class of flower known as spidery Chrysanthemums, the peculiar fantastic appearance of the blossoms suggesting this description. The florets are fairly long and tapering, being deeply cut at the ends. The partially developed florets, too, have a pretty pointed and wiry look, making a pleasing diversion in form from the more orthodox sorts. Clear rose-pink is a good description of its colour.

**Rhipsalis Cassaytha.**—A very curious species with pale green forked branches nearly 2 feet in length, and occasionally furnished with small, nearly milk-white berries of the size of those of Mistletoe. During summer the above plant flowers somewhat freely on the sides of the secondary shoots, and if a greater number of berries resulted, it would certainly constitute a very interesting plant for autumn decoration. The species belongs to the West Indies.

**Chrysanthemum Mrs. W. Butters.**—This is a pretty little Japanese, and grown freely produces a number of pure white blossoms from lateral growths. In a cut state a spray may contain a dozen blossoms, and as such makes a pretty display in small vases. The form of flower is somewhat unique, the narrow florets being deeply cut at the ends, giving the bloom a fimbriated appearance. The National Chrysanthemum committee commended it as a late sort for cutting.

**Chrysanthemum Mrs. J. R. Tranter.**—A refined Japanese flower, not over large, but sufficiently so to be considered a useful bloom for the exhibition board. As exhibited at the National Chrysanthemum Society's floral committee early buds developed creamy white flowers, faintly suffused and tinted rose, but a bloom from a late bud was freely streaked and edged rosy purple. It grows about 4½ feet high.—C. A. H.

**Chrysanthemum Violaecum.**—This is the latest addition to the Japanese varieties for exhibition, and as shown before the National Chrysanthemum Society's floral committee on Monday last appears to be a promising flower. The bloom is not particularly deep, but of great breadth, and had an immense number of undeveloped florets when seen on this occasion. The colour is best described as pale rosy violet with a cream centre. In height the plant is about 4 feet.—C. A. H.

**Agave dasylyrioides.**—This species, while not differing very materially in the large succulent leaves from others of its genus, possesses in great degree an individuality of its own by reason of its giant inflorescence. This latter, including the scape, is some 8 feet in length, the pale greenish yellow flowers emitting a very peculiar and not pleasing odour. A strange feature of the inflorescence is the manner in which it folds itself into complete rings. The species is now flowering in the large Cactus house at Kew.

**Solidago virgaurea nana.**—This dwarf member of the Golden Rod family is scarcely so well known as it deserves, and being the only kind that could figure in the front row of the border is certainly worth greater care and attention. Not that the plant is in any degree tender or even difficult to grow: far from it, as it is quite a vigorous grower for so dwarf a plant. Good specimens continue a long time in flower, this year especially. Indeed but a few days since it was still carrying many of its golden sprays of blossom.

**Othonna cheirifolia.**—There is a good deal of character about this plant when seen in large spreading patches during winter, whether on rockwork or the level ground. It is, however, always best in the former position, and the silvery-grey tone of its rather succulent leaves is decidedly pleasing when freely planted. There are some people who have doubts concerning its per-

fect hardiness, but there is little need for fear when the plants occupy a slightly raised position and are firmly planted in sandy loam. A sunny slope covered with this plant is very striking.

**Skimmia Formani.**—In your note as to this in last week's GARDEN you speak of the persistence of the berries. Probably this persistence is carried to a greater extent than many of your readers are aware. The first plant of this *Skimmia* which I ever saw was in the conservatory at Melville Castle, and the head gardener explained, on my expressing surprise at the enormous quantity of berries upon the plant, that the berries remained upon it for three years. A careful examination satisfied me that this was correct, and I have since found that, if protected from birds, some of the berries will remain for two years out of doors. The plant is a most beautiful object in a cool house, and should certainly be more frequently seen.—A. KINGSMILL, Harrow Weald.

**Physalis Franchetti.**—This handsome species has been referred to frequently of late, and certainly a plant that so long remains in excellent condition cannot be too well known. The two groups of it in the Kew herbaraceous ground were on November 26 conspicuous at 100 yards distant. On a closer view, the majority of the brilliantly-coloured calyces that so completely furnish the plant appeared little worse than a month ago, though at this time with foliage intact the plants were better furnished than at present. This species, both by its height and freedom of growth, promises to be a great acquisition to our gardens. It is also equally free-fruited, while the large and handsome calyces are at least three times the size of those of the older kind.

**Lapageria alba.**—This well-known climber is not usually seen flowering abundantly at this late date, yet it is even more precious now that such things are scarce than during the summer months when flowers are more plentiful. Quite recently, however, we were struck with the beauty and purity as well as freedom of a large plant occupying what may appear at first sight a not very favourable position. The plant had been put out in a prepared bed of soil beneath the stage in the greenhouse, the growths being drawn through the woodwork of the stage when long enough. In this position, trained to a glass partition between two greenhouses, the plant has prospered, and some fine vigorous shoots made during the present season were flowering abundantly, the long racemes of wax-like flowers very pure and beautiful. Judging by the vigour and freedom of flowering in these young growths, it is not improbable that the flowering of this plant may be enhanced if a judicious thinning out of small shoots were adopted, removing these at the base.

**Hellebores from seed.**—As a rule the seeds of the Christmas Rose are somewhat slow to vegetate, though an instance to the contrary came under notice a few days since. In the spring of the present year a gathering of seeds was taken from some good-sized clumps that had furnished many flowers during the preceding winter. For two or three years past a similar gathering has been made, and the seed which was sown in boxes never vegetated. This year, however, instead of sowing as usual in boxes, the seed was sown at once haphazard in the open, the spot selected being at the base of a thick broad hedge of Privet, which was naturally dust-dry for weeks together. In a few weeks some 200 or 300 seedlings appeared, notwithstanding the surface was very uneven and had several times been subjected to a rather rough watering. At the present time these seedlings are large enough to transplant and are but little over six months old. This is the most successful attempt I have seen, as the seeds frequently remain dormant a whole year after sowing.—E. J.

**Boeckonia cordata carnea.**—This new variety of *Boeckonia cordata* is mentioned by Mr. E. Burrell in his interesting and valued "Flower Garden Notes" on pp. 400-1. As Mr. Burrell says he has not seen it, I may perhaps be allowed to re-

mark that I fear it scarcely bears out the description of the catalogues. I grew it here during the past season, and have been disappointed with the colouring. It is, perhaps, hardly fair to judge a plant by its first year's behaviour and appearance, but I must say that I do not think that this variety will become popular either with the general public or, what is even of more consequence, with the more informed class of growers of hardy flowers. The colouring is not distinct enough and looks dull and ineffectual. It is not deeply-coloured, as Mr. Burrell appears to have been informed, and I can hardly think it suitable for contrasting with lighter things. These remarks are to be taken as subject to modification from further experience, and have been formed with some regret, as a distinct variety of the handsome Plume Poppy would be a decided acquisition.—S. ARNOTT.

**Convolvulus Cneorum.**—Quite recently reference was made to this beautiful species in THE GARDEN, suggesting that it was worthy more general cultivation. This is certainly true, for we have few plants more beautiful and interesting. Even for its silky leafage the plant is worth growing. The above *Convolvulus*, however, is not sufficiently hardy in all gardens to be worth the risk of growing in the open air. In favoured localities, such as the Isle of Wight and parts of Devon, the plant would not only prove quite easy of culture, but a complete success. In many gardens where ranges of glasshouses exist this would constitute a capital plant for training to the wall on a south aspect, preferably against an Orchid house. In such a position, given a light, warm soil, the plant will usually grow and flower freely. Planted against a warm wall at Kew there is a fine example of this species that has flowered abundantly during the past summer, and even now the tips of the shoots are freely covered with flower-buds, and in a few instances nearly expanded blossoms also. This year the growth has been so abundant that much has been removed, as the example has exceeded its allotted space.

**Flowers in November.**—The phenomenal absence of frost and storms and the fine summer weather experienced in this district up to the present time (November 27) have prolonged the blooming of summer-flowering and tender plants to a remarkable extent. Up to the present we have not had anything approaching a frost, and up to within a week ago (when a heavy storm of wind and rain occurred) the occupants of beds and borders were as gay as at any time during the summer, and even in some cases more so. To send you a list of plants now in bloom would be to mention the whole of the summer and autumn-flowering plants and shrubs, tender and hardy. Such a dry, warm season has brought some late autumnal bloomers into greater prominence and beauty than usual. I refer to such as *Schizostylis coccinea*, which is more valuable and beautiful than I have ever seen it in the open. Many of the shrubby *Veronicas* are just now grand, notably *Marie Antoinette* (pink), *Blue Gem* and *Vernicosa* (white). Bold masses are very telling, and so is a large specimen of *Aralia Sieboldi* in full bloom and fragrance, most attractive on the lee-side of tall Bamboos.—Jno. ROBERTS, *The Gardens, Tan-y-burh, N. Wales.*

**Reinwardtia trigyna.**—This is perhaps one of the most valuable of small shrubby plants that flower during the autumn and winter. The plant would in all probability be even more popular were it less susceptible to attacks from red spider, which very much disfigures the plants and causes the foliage to fall prematurely. The showy blossoms of orange-gold are very attractive when the plants are grouped freely in the cool conservatory at this season; indeed it is one of the few dwarf plants of this colour obtainable during the winter months. In most private gardens endeavour is made to maintain a supply of plants from year to year by means of cuttings. Better and more satisfactory results follow the raising of this plant from seed. By carefully fertilising a few flowers

plenty of seed may as a rule be secured. The chief advantage the seedlings possess over cuttings is their greater vigour and freedom of growth in the first year, while not only are the flowers considerably larger, but the plants do not in the same degree suffer from red spider. Where the plant is grown in quantity, free syringing with soot-water during summer will be found of much service. Compact bushes of this Indian shrub are now covered with a profusion of buds and blossoms.

## SOCIETIES AND EXHIBITIONS

### NATIONAL CHRYSANTHEMUM SOCIETY.

A MEETING of the floral committee of this society was held at the Royal Aquarium, Westminster, on Monday afternoon, Mr. Thos. Bevan presiding. Very few novelties were staged on this occasion, and only two varieties received first-class certificates, viz.:—

**CHRYSANTHEMUM MRS. J. R. TRANTER.**—A pretty refined Japanese bloom, with fairly long, curling, and slightly twisted florets of medium width; colour creamy white, edged and streaked rosy-purple. From Mr. J. R. Tranter, nurseryman, Henley-on-Thames.

**CHRYSANTHEMUM VIOLACEUM.**—An immense Japanese bloom with innumerable florets of medium width; colour a pale shade of rosy-violet with white reverse. Awarded to Mr. E. Beckett, The Gardens, Aldenham House, Elstree.

Commendations as late varieties were granted to *Chrysanthemum Mrs. W. Butters*, a pure white decorative Japanese variety with narrow florets deeply fimbriated, and making a chaste little flower, and *Sam Caswell*, another pretty little spidery Japanese variety with fairly long, narrow, and deeply cut florets; colour clear rose-pink.

Mr. G. W. Forbes, Regent House, Surbiton, staged a dozen small vases of very pretty single sorts, but too freely disbudded, thus losing the charm which characterises this form of the flower. Six blooms of a variety named *Moor Park* were staged by Mr. Haggart, Ludlow. This is a medium-sized flower, reddish-crimson inside the florets, with a reverse of a pretty shade of nankeen-yellow, the florets being broad, pointed and incurving. A rich golden-yellow sport from the bronze *La Triomphante* looks like making a useful decorative variety.

**The weather in West Herts.**—A week of stormy, changeable weather, but on the whole warm for the time of year. On the warmest day the shade temperature rose to 53°, and on the coldest night the exposed thermometer showed 11° of frost—the greatest cold indicated by it during the past autumn. At 1 foot deep the ground is now about reasonable in temperature, but at 2 feet deep it is about 1° warmer than the average. Rain fell on five days, but only to the aggregate depth of about half an inch. During the twelve hours ending 6 a.m. on the 29th ult. the wind was blowing at the mean velocity of 21 miles an hour, and between 6 and 7 p.m. the record reached 25 miles—direction, W. The velocity last-mentioned shows a stronger gale than any recorded here in November since 1891. The wind, however, was on two days in March of the current year quite as high. The past month was a warm November, but during the previous eleven years there have been three Novembers in which the mean temperature has been higher. Rain fell on eleven days and to the total depth of an inch, which is 1½ inches below the average for the month, making this the driest November since 1879. October and November taken together come out exceptionally dry; indeed, with two exceptions, 1871 and 1879, drier than the same two months, during the preceding forty-one years. The last five days were windy, but taking the

rest of the month, the mean rate of movement of the air only amounted to about three miles an hour. During the last twelve years there have been only two Novembers with such a small record of sunshine, the average duration being less than 1½ hours a day.—E. M., *Berkhamsted.*

## OBITUARY.

### MR. JAMES BATEMAN.

ON November 27, Mr. James Bateman, a distinguished botanist and gardener, died at Worthing. Mr. Bateman was born in 1811, and as a young man took great interest in the cultivation of tropical fruits. His chief claim to recognition is his work in connection with Orchids. His first Orchid was purchased when he was a gentleman-commoner at Magdalen College, Oxford; in 1833 he sent, at his own expense, the collector Colley to Demerara and Berbice to collect plants. Shortly after this he induced Mr. G. Ure Skinner, a merchant trading with Guatemala, to send him Orchids, with the result that within ten years the finest Orchids of Guatemala were in cultivation in English gardens. In 1837 Mr. Bateman commenced the publication of his work on the "Orchidaceae of Mexico and Guatemala," which he completed in 1843; this book comprised the most remarkable series of coloured plates which had up to that time appeared. His "Monograph of *Odontoglossum*" appeared between 1864-7. He was not only the pioneer of Orchid culture, but he was one of the first to insist on the rational cultivation of these plants. He contended that the then prevailing system of cultivation was essentially wrong, and his lectures on "cool Orchid cultivation" gave an impetus to the popularity of these plants which can hardly be realised now. Mr. Bateman, who was a man of considerable wealth, was fond of experimenting, and his "Chinese garden," his "Egyptian court," and his "Wellingtonia avenue" at Biddulph Grange were among the first and most interesting experiments of the kind attempted in this country. Of late years he had resided at Home Lodge, Worthing, in the garden of which he formed a miniature alpine garden, in which many rare and interesting plants were grown. He was a J.P. and D.L. Staffordshire, and J.P., Cheshire.—*The Times.*

**Royal Gardeners' Orphan Fund.**—We are asked to state that Mr. P. C. M. Veitch, of The Nurseries, Exeter, has consented to preside at the annual friendly dinner of the committee of the Royal Gardeners' Orphan Fund at Anderton Hotel, on February 18, 1898.

**Tree Pæonies.**—Will some reader of THE GARDEN kindly name a few single light-flowering Tree Pæonies that are worth growing?—S. P.

\* \* The following, or at least some of them, should suit your purpose: *Margaret Attwood*, pure white, golden centre; *The Mikado*, rose and buff; *Cælestis*; *Regalis*, rose-flesh; *Phebus*, salmon and rose; *Luna*, white; *Antigonus*, French white and lilac; *Odonata rosea*, *Glory of Shanghai*, soft cerise; *Mammoth*, pink; *Mme. Rattier*, cream and flesh; *Morris*, soft rose; *Jupiter*, salmon; and *Duhamel*, lilac-rose.—Ed.

**Names of plants.**—*Latimer Clark*,—1, *Streptocarpus* var.; 2, should like to see better specimen.—*J. McK*,—1, send better specimen; 2, *Retinospora pisifera*.—*Lumister House*,—*Lycaste lanipes*. *J. R.*,—1, probably *Mesembryanthemum roseum*; 2, *Cupressus Lawsoniana erecta viridis*.—*Mrs. Elliott*.—A small flower of *Cymbidium giganteum*.—*J. C.*,—1, *Cupressus Lawsoniana* (seedling form); 2, *Juniperus rigida*; 3, *Thuja gigantea* (*Lobbi* of gardens); 4, *Juniperus chinensis* mas. We can only undertake to name four specimens in any one week.

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(Illustrations in Italics.)

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## CHRYSANTHEMUMS.

### INCURVED CHRYSANTHEMUMS.

THESE have certainly been seen in better form this autumn than during several seasons past, but it is not so much that kinds like Impress of India, Lord Alcester, and so on, which were formerly the leading ones, have been noted in finer condition than usual, but new varieties that are fast taking the place of established ones that did duty so long. Take for example the yellow sort Chas. H. Curtis, which the Aquarium recently all the prizes in a class of half-a-dozen of one variety were taken with flowers of this. They were all very fine, but wanted a little more patience bestowed upon them in the matter of arranging their petals more evenly. Incurved Chrysanthemums require more time, if not greater skill, than other classes to exhibit them to the best advantage, and they will repay extra pains in a generally neat and finished look. The new kinds which have come forward this year will, I think, give a further impetus to their culture, and will alter the appearance of stands of this class. I sometimes think it is the increased use of the Japanese sorts that has dwarfed the incurved and made them seem so much smaller than we saw them a few years back. However, as far as size goes, Mme. Ferlat is a remarkable one. It is white, perfectly incurving, and of no substance. The blooms come 6 inches across and of proportionate depth, the habit of the plant being very dwarf. It is also easily grown. Mlle. Lucie Faure was certificated as an incurved variety. It comes close and solid from late-formed buds, but loose, with a Japanese-like form, early in the year. Hence if this matter of buds be neglected, it may prove disappointing. This variety, too, is of a pure white and has first-rate quality. Ernest Amell, an English raised variety I believe, is another notable addition. It bears large, full, well-formed incurving blooms of a pretty light

buff shade. Lady Isabel is a large blush-pink bloom. This is a fine acquisition. It really takes the place of the old Queen of England. Duchess of Fife has large, deep, solid white flowers, tinted blush, however, from late buds. It is rather tall in growth, but very strong. Miss Dorothy Foster and Miss Violet Foster are both very nice new sorts. They have violet-rose blooms of different tints. Rena Dula is a perfectly formed incurved flower. The blooms, of medium size, full, and solid, are blush-white in colour. Ma Perfection is an excellent pure white. It is a dwarf and very free grower. This is a neat and taking flower. Mrs. R. C. Kingston bears blooms of a white, tinted-pink colour, and is of good form. The blooms are large, deep, and solid. Miss Phyllis Fowler is a light yellow. I saw it in good form on several occasions this autumn although generally it comes a bit rough in shape. King of Orange has blooms of a charming tawny-yellow tint. It is somewhat late, but still a very useful addition. Bonnie Dundee does not produce flowers of large size; they are, however, nicely incurved, and the colour, bronzy yellow, rich and distinct. Neither Mrs. F. Hepper, Ideality, nor Perle Dauphinoise, although new, appear likely to prove worthy of extended culture, but George Haigh, a fawn-coloured sport from Robert Petfield, is a neat and excellent kind. Triomphe d'Ève was seen in more than one exhibition in Kent. As yet it does not appear to be known out of that locality. It is white, of medium size and capitally formed. By the way, those fine old types, Lord Alcester, Golden Empress of India—in fact, the group designated the Queens—were noticed in better condition at local shows in the above-named county than at more important meetings in London and elsewhere. I always thought the white J. Agate too uncertain. It is also tall in growth, but a good incurved when at its best. Nor is C. B. Whitworth certain enough to become esteemed. It is at best an imperfect flower. Major Bonaffon has fine yellow incurved blooms, but it

is somewhat late. Wm. Tunnington, J. Fulford, and Owen's Crimson are rough in form and will never become leading types. M. P. Martignac, light yellow, and D. B. Crane, buff colour, are nice forms when well grown. Among older kinds, the Princess of Wales group, which includes Mrs. Reale, Mrs. S. Coleman, Lucy Kendall, Miss M. A. Haggas, and Violet Tomlin, are yet very fine. Princess of Teck also, and the sports, Hero of Stoke Newington, Mrs. Norman Davis, and Lady Dorothy, besides a few others, are worth keeping. But such sorts as Lord Walseley, Prince Alfred, Princess Beatrice, John Salter, Mrs. Shipman, Lady Hardinge, Refulgens, Alfred Lyne, Barbara, and a host of others are not good enough to be cultivated in these days. H. S.

**Chrysanthemums from September to Christmas.**—Will any reader of THE GARDEN kindly give me the names of twenty-four sorts of Chrysanthemums in different colours, with dwarf habit and easily grown for cut blooms and decoration? I have tried about 100 sorts picked out from catalogues, but have found very few of them suitable. Vivand Morel, W. Seward, Florence Davis, Ch. Davis, Lincoln, G. W. Childs, Golden Gate, Beauty of Exmouth, La Triomphante, Sunderbruch, Kentish White, and Commander Blusset, I think, are very good ones.—A LOVER OF THE GARDEN IN SWEDEN.

**The crown bud.**—Is the crown bud in Chrysanthemum the first bud that is formed after striking, or is it the first bud that is formed after the break?—A. F. C.

\* \* \* The bud which causes the natural break in Chrysanthemum plants is really a crown bud, because it is surrounded by little growths instead of other buds. However, it is not recognised as such, for the reason that the break bud does not give perfect blooms only in one or two exceptional instances. The first crown bud, therefore, is that which is formed after the natural break or after a plant has been topped back in early spring.—Ed.

**A change of stock.**—Now that the time for striking cuttings for another year is at hand, it

will be well to point out how advisable it is to have a change in the case of some notable sorts. Edwin Molyneux, Vivand Morel, Charles Davis, Mlle. Thérèse Rey are common examples of those that exhibit a want of vigour, probably through being continually propagated from highly-fed plants. In these and other instances of debility a plant or two of each should have been allowed to grow the whole summer in the open ground. If protected now they give a good supply of healthy cuttings which are likely to give improved results another year.—H. S.

#### SOME NEW CHRYSANTHEMUMS.

ALTHOUGH one might have expected finer examples of G. J. Warren than were seen this year, it has, perhaps, hardly had time to get thoroughly established, and with an early start from strong cuttings, next season should see it, with the parent, Mme. Carnot, quite at the top of the list of show varieties. The sort named Yellow Mme. Carnot, which won the rare distinction of being the best bloom at the Aquarium in November, is a separate sport, having originated with the exhibitor, Mr. Mease. It is a shade or two lighter in its yellow, but whether both can be placed in a stand as distinct varieties without risk is a question to be settled when they are grown side by side. Any coloured variety from so fine a type as the grandest of all white show blooms is welcome, and a yellow, now it is fixed, may be considered the greatest gain of the year in Japanese Chrysanthemums. Ella Curtis has very long, broad, thick petals. These are flat and build up a flower of remarkable beauty; colour yellow, with bronzy streaks. As an exhibition kind this is an acquisition. Mary Molyneux, like the last-named, is an English seedling. The florets, long and of good substance, incurve in an irregular way and form a bloom of fine depth; colour a clear shade of pearly pink. Georgiana Pitcher is hardly new, but is comparatively unknown. The colour is rather a deep shade of yellow, not over-bright, but pleasing. It is a full, deep, slightly incurving form, the lower florets drooping, of massive build and fine substance. It will be valued as an exhibition flower. J. Chamberlain is a large, handsomely-formed flower, the inside of its florets having a most vivid colour. The back part, however, shows too much by the habit of curling. This slightly detracts from its value, but if by extended culture it can be made to exhibit the inside tint only, it will prove one of the very finest of recent introductions. Mme. G. Bruant is a very large bloom of drooping formation, colour white, tinted rose on the first opening florets. The extra colour makes it appear a bit dull—neither a white nor pink—but its immense size will find it many admirers as a show bloom. Robert Powell has incurving blooms of fine width and depth, colour a deep bronzy shade of yellow. Although we are not wanting in such tints, this is a most excellent new kind. Master H. Tucker has very sturdy growth, without which any new Chrysanthemum is wanting in one of its important qualities. This is a first-rate gain because of its colour. Chestnut-crimson describes its shade, and as some of the florets curl inwards a lighter shade is seen, but the former predominates. It is a large, full, massive flower, and one that is likely to become popular. Mlle. Laurence Zédé is quite one of the best of the year, perhaps the finest of M. Calvat's new set; colour a lovely shade of mauve-pink. The flowers are extra large, full and deep. Its florets incline to incurve, and the habit of the plant is excellent. Mrs. F. A. Bevan is not a large flower, but the colour, flesh-pink, is particularly pleasing. The florets droop gracefully. Mrs. S. C. Probyn is a pretty sort, but not one of the largest; colour a charming shade of rose-pink. Its petals incurve slightly, the growth being dwarf and sturdy. Apart from its value as a show flower it is likely to become one of the most esteemed for the supply of cut blooms in quantity quite late in the autumn. George Foster is a large yellow incurving Japanese flower. Its massive build and substance will

make it a valuable exhibition variety. N. C. S. Jubilee is a decided acquisition as regards colour. The shade may be called lavender or heliotrope. Its shape is incurving and the blooms are large, whilst the habit of the plant is dwarf and sturdy. President Nonin, after a full season's growth, will, I fancy, prove a most beautiful new kind. The colour is a very rich and distinct shade of bronze-yellow, the bloom being large and well formed. Mrs. Charles Bireh bears flowers of a lilac shade, the form incurving. The bloom is large, full, and has fine substance. Of Werther I fancy the best has not yet been seen. Its colour, a purple-crimson tint, is one that is welcome. The bloom is a bit flat, but broad, with petals of exceptional thickness. Julie Scaramanga, a recently-raised English seedling, is a flower of some merit. It has blooms of drooping shape, large, full, and striking. The colour is a rich shade of bronze or old gold tint. Earlswood Beauty is a single Chrysanthemum, and, to my thinking, the handsomest of all singles. It is pure white. The florets are long and have a light appearance, the centre or disc being bold and showy. For all kinds of floral decoration additions like this are most valuable. H. S.

#### GROWING CHRYSANTHEMUMS.

WILL any of the contributors to THE GARDEN kindly assist me in my difficulty over the growing of Chrysanthemums? I took up their culture last year, and the result is not satisfactory. I do not aim at exhibition blooms, such as I saw in London on the 9th ult. I simply wish to grow, first, good cut blooms for home decoration; secondly, neat bush plants for the conservatory; thirdly, dwarf plants with some good blooms to stand on the front of the stages. I am quite at sea as to stopping, timing, and taking the buds, whether first, second crowns, or terminal buds. A simple cultural note directing me how to proceed, from the taking of the cutting up to the flowering period, would be much valued by many more besides myself, if I may judge by the conversations I had with amateurs at the recent show. An up-to-date list of say three dozen of the best and most easily grown Japanese sorts for the above purposes would also, I know, be of much service.—IGNORANT.

\* \* \* There is no reason why "Ignorant" should not be successful in the culture of Chrysanthemums for the purposes named without being much troubled with such terms as first or second crown buds, which certainly have an important meaning in connection with the production of the large specimen blooms seen at recent exhibitions. First as to

#### PROPAGATION.

Cuttings may be rooted from September up to March. The early date is the better if large bush plants are desired, but the latter time is suitable for growing neat little, dwarf plants in small pots, say those 6 inches across. Chrysanthemum cuttings root freely if not coddled. They are mostly rooted in boxes about 9 inches deep, kept air-tight by a covering of glass. This plan is by no means the safest for those who are not experienced, because the cuttings may become too moist, or may be left in the boxes so long as to get drawn and weakly. I would strike them in the following way: Get a shallow box or boxes (it matters not how large or small so that the depth is not more than 3 inches), and fill to the brim with loam and leaf-mould in equal parts, with just a sprinkling of silver sand. This should be run through a fine sieve and pressed in level and firm. Then dibble in the cuttings (which may be 3 inches or so in length) a couple of inches apart. Give a thorough watering to settle the cuttings properly, and stand the box in any convenient part of a greenhouse, which is only heated to keep out frost, or if in a structure which is made warm for other occupants, put the Chry-

santhemums on a shelf near the glass, where of course, the air will be comparatively cool. The leaves will flag a bit for a time. This, however, will not hurt them. I would not sprinkle the leaves with water unless fire-heat is applied. In a month or so the cuttings will have pricked up and rooted. They should then be potted singly into small pots, the soil being similar to that named above. As the attention needed will be not to let the young plants suffer through want of water, and air must reach them on all favourable occasions—that is to say, when it is not freezing. These conditions may continue up to the end of March. The earlier-struck plants will then require another shift. Use pots 5 inches in diameter. For this and a later shift the soil should be of a strong character. Loam may form two-thirds of the whole. This varies, but it is generally understood to be the top spit of pasture land, dug a few months before use so that the green grass may decay. This is chopped or broken up and the fibre not removed. Instead of leaf-mould a rotted manure sifted and a slight addition of coar sand. From April to the end of May the plants grow better in frames than in greenhouses. The bottom is moist and cool, and one may give air greater abundance. When potting, it should be said, making the soil firm is a matter of some importance. The plants up to this time will have but one stem, and when each has reached 6 inches the point may be nipped off so as to induce short, bushy growth. Watering is always a matter which must be carefully watched. After the plants have been potted, a soaking shower at once be given; but for a time, until the roots get hold of the new soil, guard against making the soil sour by over-abundant supplies. As the season advances, however, and the plants become large, daily attention must be given to moisture at the roots. Nothing can make up for neglect watering plants in pots, but it is also as important that too much shall not be given. A ringing sound, by tapping the pot with one's knuckle, indicates the need of water; then enough should be given to moisten the whole ball and the plants be left till dry again—not "just a little" on the surface each day, as is sometimes done.

Allow the plants plenty of room. Do not let the leaves of one touch those of its neighbour and stand them in an open position during the summer. The side shoots may have their points nipped off when 6 inches long. This pinching may continue to the end of June. By that time the capital bushes will have been formed. The first potting should take place about the end of May. One need not mention the necessity of using sticks to keep the growths upright or safe from damage through winds, nor impress upon the amateur that green-fly must be kept away throughout the season. Tobacco dust is the best remedy for the pest. As regards the flower buds, let them come in a natural way. They may be thinned at the will of the cultivator. The number of blossom-plants is allowed to perfect will affect their size and the time of flowering will vary slightly with different varieties. When the flower buds are swelling, the roots need stimulating with manures. Strong doses are not required, but weak mixtures and often, so as to carry the plant through in perfect health after the roots have exhausted the potting soil. In giving the

#### VARIETIES

I shall name those that blossom from October to December, so as to give a lengthy season, and at the end I will select a few of the best as being dwarf in habit, sorts which would prove useful for giving nice little specimens in small pots when struck late in the spring: A. E. Fewkes (yellow), Bonle d'Or (bronze), Australia Gold (light yellow), Charles Davis (bronzy rose), Col. W. B. Smith (terra-cotta), Emily Silsbur (white, early), G. J. Warren (yellow), Golde Gate (tawny yellow, late), Hairy Wonder (but novel), John Shrimpton (crimson), Lady Byron (white), Lady Saunders (primrose), Lonise (blush), Madame Carnot (white), Madame Ferlat (white), Madame Gustave Henry (white), Madame N.

licoud (pink), Modesto (yellow), Matthew Hodgson (crimson), M. Ch. Molin (bronze), Master H. Becker (crimson-brown), M. Chenon de L'éché (salmon-rose), M. Ed. Andre (salmon red), Mrs. J. Lewis (white), Miss Elsie Teichmann (white tinted), Nyanza (late, crimson), Niveum (late, white), N. C. S. Jubilee (heliotrope shade), Phœbus (yellow), Rycroft Glory (early, bronze), Pride of Madford (amaranth), Source d'Or (bronze), Souvenir de Petite Amie (white, early), Viviani (mauve), Wm. Seward (dark crimson), and Western King (white). *Dwarf sports*.—A. H. Lewkes, Boule d'Or, John Shrimpton, Lady Saunders, Louise, Madame Ferlat, Modesto, M. Chenon de L'éché, N. C. S. Jubilee, Phœbus, Pride of Madford, Souvenir de Petite Amie, and Rycroft Glory.—H. S.

**CHRYSANTHEMUMS—NEW INCURVED VARIETIES.**

THE classification of the incurved varieties as now recognised by the National Chrysanthemum Society will assist the growers of this type very materially. During the last two or three years there have been several introductions of a very subtle character, but now the whole appearance of the incurved stand of blooms seems likely to be altered. Of course a grower would exclude from his stand such an immense and coarse-looking bloom as The Egyptian. This variety would vary most others on the same board, and on this count would be better left out until others usually large and less coarse could be set up as check row flowers. Lady Isabel, which has been of much assistance this season, is one of the finest of its kind, with grand broad florets neatly curved, early buds producing blush-white flowers, while those from later buds are of a beautiful blush colour. Mlle. Lucie Faure is another immense flower, creamy white in colour, with big and pointed florets. Early buds of this sort of flowers which are inclined to be rough, those from later buds being very neatly finished. Ernest Cannell, catalogued by some trade growers as a Japanese variety, was recently certified as incurved, and a very handsome flower it is. The florets certainly are not rounded at the tips, being somewhat pointed in fact, but the colour is one that should be very serviceable—viz., buff-flow. When finished it is a bloom of grand proportion. Another immense flower is Mme. Ferlat, put out by Mons. E. Calvat. This is a pure white bloom, of capital substance and great proportion. This is also a very full flower, with innumerable florets. A distinctly pretty one is Mrs. W. C. Egan, of true incurved form, and of goodly proportions. The colour is very pleasing, being a pale shade of rosy pink with a white centre, altogether a very promising one. Mrs. N. Molyneux is another very large popular flower, and as recently exhibited inclined to be rough; there is little doubt, however, that with proper treatment this creamy-white flower will be in great demand. Thos. Singleton is another pearly-white bloom, edged a pretty rosy pink, and although so far seen only in fair form, there are great possibilities for it. It will thus be seen that in the course of another season the whole character of the incurved displays may be altered, and many of the present pretty medium-sized blossoms be superseded by those of more pretentious quality. C. A. H.

**Yellow sports from Chrysanthemum Mme. Carnot.**—This handsome variety has sported in all sorts of places. Last season when the yellow sport first appeared in two different places the question was often asked. Are they one and the same variety? After a trial this year there seems little doubt now that they are identical in form and colour too. In addition to the foregoing, there is evidently a third sport, as it is now generally understood that the bloom of yellow Mme. Carnot which secured for Mr. Mease the prize for the premier Japanese bloom at the late exhibition of the National Chrysanthemum Society was none other

than a sport in that grower's collection. During the present season sports of a similar colour have been heard of in different parts of the country, and within the past few weeks a sport of the same colour has been developing in my collection of plants. This plant, together with several others, was from cuttings taken from a plant of Mme. Carnot, so that there is no doubt about it, both the flowers of the sport being a lovely soft pale yellow. This only emphasises the sporting propensity of the parent variety, and it is pretty safe to assume that in a short time we may secure other sports, which cannot fail to be of immense service to growers for exhibition.—D. B.

**SHORT NOTES.—CHRYSANTHEMUMS.**

**Chrysanthemum Madeline Davis** is a very lovely and refined Japanese flower, in build somewhat like Phœbus, but possessing longer florets, also more tapered than those seen in that variety. The colour is best described as silvery white, tinted throughout with pale violet and edged pale rosy violet. The habit is dwarf and the constitution of the seedling plant very robust.—D. B.

**Chrysanthemum Mrs. John J. Glessner.**—This is a new American variety of a pretty shade of colour, being a rich golden yellow, tinted apricot. The florets are rather broad, neatly incurving. Mr. Norman Davis thinks the flower a very promising one. It should make a capital exhibition variety, and, being free flowering, should prove useful for decoration. Unfortunately, the growth is rather tall, but exhibitors will not consider this fact very seriously.—D. B.

**ORCHIDS.**

**CALANTHES.**

IN speaking of Calanthes one usually includes only the epiphytal kinds, such as *C. vestita* and the many choice varieties and hybrids related thereto. Than these there are few more useful winter-flowering Orchids, especially in country districts where the blossoms come pure and rich in colour, and do not suffer from the effects of the baneful fog so prevalent in the metropolitan district and in the vicinity of large towns generally. They are well-known and popular plants that may be grown in an ordinary plant stove quite as well as in the Orchid house proper, provided due attention is given to cultural details. A light position, only lightly screened from the sun's rays, must, if possible, be allowed. Some cultivators, indeed, grow the plants almost entirely without any shading, but, unless very great care is taken with the ventilation, especially during the earlier part of the season, the foliage will be ruined, and the whole system of the plant checked in consequence. There can be no doubt, on the other hand, that the more sunlight allowed, the more free-blooming will the plants be, and the more satisfactory in every way. To heavily shade the plants from the first and allow too little air is one of the commonest mistakes in the culture of Calanthes. It is usual to repot the bulbs in early spring just as growth commences, but as a matter of fact they may be repotted at any time after the flowers are past. I have never found the least advantage accrue to the plants by starting the pseudo-bulbs in Moss or in very small pots, subsequently shifting into the flowering size, or in any other of the ways that some cultivators think necessary. If dealing with any choice or rare kind, and one that had been closely propagated before reaching me, I may endeavour to encourage it by a little nursing treatment, but a good stock of healthy, strong bulbs cannot be better managed than by being placed at once in their flowering

pots. These must be clean, and exceptional care taken with the drainage, for the quantity of water required by these plants is very considerable. Good sound fibrous loam, Sphagnum Moss roughly chopped, and peat in equal proportions will form the basis of the compost, and to this may be added a little dried cow manure in varying quantity according to the quality of the loam, and plenty of roughly broken charcoal and potsherds. Finish the line of compost well below the rim of the pot, and the base of the pseudo-bulbs must be just below the compost, being held in position by a few of the old roots which may be left on for the purpose. One good soaking of water may be given to settle the soil about the base of the bulbs, but after this the compost should be kept perfectly dry until roots are forming. When the plants are potted early this will be, perhaps, a month or more, but if left until growth commences, it is not long before root-action follows, when water will be needed, sparingly at first, but in increasing quantity as the roots get hold of the soil. Plenty of heat and a brisk, yet moist, atmosphere must now be maintained, then growth will be rapid and clean. See that each plant stands well clear of its neighbour, as it is important that air and light play with freedom about the forming growths and foliage. When there is a good number of leaves and the roots have taken hold of all the compost, a little weak liquid manure may be given once a fortnight or oftener, according to the amount of manure in the compost. This must not be over-done, for the big plethoric bulbs produced by over-feeding are by no means the most satisfactory in the long run. The first sign of the approaching flower-spikes is seen in a whitish swelling at the side of the bulbs, and when this is noticed the leaves often commence to fade, and water must be given in less quantities. Atmospheric moisture is not now so necessary, but must not be dropped too suddenly, as the more gradually the foliage dies off the better. All the time the spikes are forming take care the water does not lodge in the cleft at the base of these, as it is apt to cause and encourage the black rot, so much feared by growers of Calanthes. Very little moisture at the roots in fact is needed, for these have almost fulfilled their functions by this time, and the stored-up nutriment in the bulbs keeps the spikes going. The most mischievous practice connected with their culture is placing them about in draughty corridors and passages in the house. Many Orchids stand this treatment with little detriment, but it is fatal to Calanthes. The pseudo-bulbs should never be in a temperature much below 55° if good results are looked for; they may not show anything wrong at the time, but they are sure to start weakly in consequence. The most troublesome insect pest is brown scale, this much affecting the lower side of the foliage and the old bulbs.

The treatment noted above is of course not suited to the *veratrifolia* and *masuca* species and varieties, but only to those above indicated. The number of fine hybrids is now very large, and anything like a full description would take up far too much space for the present note, but may be referred to later.

**Phalænopsis Schilleriana vestalis.**—This, the white form of *P. Schilleriana*, is exceedingly rare. A fine plant, said to be the only one in the country, was recently noted in bloom in Sir F. Wigan's collection at Clare Lawn, East Sheen. The flowers are pure white, with the exception of the basal halves of the lower sepals, which have a very faint indication of light brown spots, a

few yellowish-brown ones near the base of the side lobes of the lip, and a yellow crest. It is a chaste and lovely form. This unique variety was named by the late Professor Reichenbach in 1882 from the collection of Messrs H. Low and Co., by whom it was introduced.—C.

**Dendrobium Aspasia.**—This handsome hybrid, raised in the collection of Messrs. J. Veitch and Sons, first flowered in their Chelsea nurseries in 1889, under the name of *D. Wardiano-aureum*. It is the result of crossing *D. Wardianum* with the pollen of *D. nureum*. The sepals and petals are creamy white tipped with light rose-purple, which is more prominent on the petals. The front lobe of the lip has a broad area of creamy white tipped with purple shading to crimson, with some orange on the disc. It requires careful watering during the resting season, to avoid undue shrinking of the bulbs. Excess, on the other hand, will be liable to cause the bulbs to decay at the base.—H. J. C.

**Ornithocephalus grandiflorus.**—This distinct and lovely species was recently noted in flower in Messrs. J. Veitch and Sons' nurseries at Chelsea. The spikes, 5 to 8 inches or more in length, are produced from the axil of the last made leaf. The sepals and petals are white, with a bright green spot at the base, the lip white, with a horse-shoe-shaped blotch in the centre. It is a native of the Organ Mountains, of Brazil. It requires a cool intermediate house, and succeeds best when grown in pans suspended from the roof, the potting compost consisting of good fibrous peat and living Sphagnum Moss in equal quantities. It requires a liberal supply of moisture during the growing season, and a fairly dry atmosphere when at rest.—STELIS.

**Cirrhopetalum refractrum.**—This is a remarkable species. The flowers are produced on a raceme 15 inches long when the plant is in a deciduous state. The lower sepals are open in the centre at the base for about half an inch, combining from this opening to the apex, the whole being about  $2\frac{3}{4}$  inches in length, pale greenish yellow, longitudinally lined with brown. The upper sepal is about three-quarters of an inch long, pale green, heavily suffused with purple, with numerous bristles on the edges. The petals are about half the length of the upper sepal, covered with small hairs, and similar in colour. The movable lip has the appearance of a miniature spotted spider, about half an inch in length, the colour being yellow in front, shading to rich purple, and barred with white. There are some twenty of these flowers on the spike. It requires cool-house treatment, placed in such a position that it can obtain the maximum amount of light. A plant of this I recently noted in flower in the Cambridge Lodge collection.—T.

**Epiphronitis Veitchi.**—This lovely bi-generic hybrid was raised in the nurseries of Messrs. J. Veitch and Sons at Chelsea. It is the result of crossing *Sophrontis grandiflora* with the pollen of *Epidendrum radicans*. It first flowered in 1890, and was exhibited at the meeting of the Royal Horticultural Society on June 24 of that year, when it received a first-class certificate. Although the blooms were small when first shown, as the plants have become stronger the flowers have also increased in size. The character of the blooms shows the influence of the pollen parent in a remarkable degree both in shape and colour, with the exception that the sepals and petals have an additional dash of crimson; the flat lip also has a larger amount of yellow on the disc and numerous crimson spots. The flowers are produced from the apex of the growth. The growth is similar to that of the *Epidendrum* parent except in the height, which does not exceed 15 inches. I find it remarkably free-growing and of good constitution. It should be grown at the moist end of a warm intermediate house and placed in such a position that it can obtain the maximum amount of light, shading only during summer from the direct rays of the sun. The potting material consists of fibrous peat and living Sphagnum Moss in about equal quantities. To increase the stock the growths may be cut off

after they have flowered, just below the roots, which are produced at intervals up the stems. These should be placed in small pots, using living Sphagnum Moss and rough sand as the potting compost. They should then be placed in a warm and moist position, and every encouragement given to induce them to break into growth.—STELIS.

**Odontoglossum Kramerii.**—This pretty and uncommon species is well worth growing on account of its distinctness, and the colour is unusual in the genus. The flower-spikes appear in autumn, being now in good order in several trade collections around London. From three to four is the usual number of blossoms produced on a spike, the sepals and petals rather short, bluntly pointed, pale rosy violet in the middle, the margins very much lighter—nearly white, in fact. The lip is rounded in front, also pale purple in colour, the centre being bright golden yellow and having brownish and white markings at the base. The species takes its name from a German collector. Being found on the coast or near it, it is one of those kinds that advancing civilisation has almost exterminated. A few plants are still sent home from time to time, and among these have appeared one or two well-marked varieties. Few *Odontoglossum* require so much heat as this kind to do it well, the warmer end of the Cattleya house suiting it well if rightly treated in other ways. It used to grow well with me in an ordinary plant stove under a Stephanotis, and this broken light appears to suit it better than either heavy shade or a glaring light. Small baskets or pans may be used, as these are more easily suspended, and in this position air plays more freely around growth and roots. With regard to atmospheric and root moisture, these must be nicely balanced: the more there is in the atmosphere, the less will be required at the roots. But while growth is active it will be found that a liberal supply is necessary to the latter, and during the blooming season it is well to be sure of plenty of moisture, owing to the dry atmosphere of the flowering house. When the plants are quite at rest very little will be needed, but at no time must the pseudo-bulbs be allowed to shrivel, or the plants will be badly weakened. The compost may consist of the usual peat and Sphagnum mixture, not a great thickness of this being used.—H. R.

#### ODONTOGLOSSUM CERVANTESI.

THERE are few more beautiful species in the genus than this, although the flowers are not so large and showy as those of some others. The pseudo-bulbs are roundish, small, and deep green, the flowers proceeding from the sides of these on three to six flowered spikes. In the typical form these are white on the sepals and petals with a few streaks of reddish-brown at the base of each. There are many varieties, the best perhaps being *O. C. decorum*, *O. C. punctatissimum*, and *O. C. roseum*. The first has large and handsome flowers, the streaks on the segment being purple; *punctatissimum* and *roseum* are sufficiently descriptive. The culture of all these is similar, and depends a good deal more upon timely attention to small details than any prescribed mode. All these small growing plants cannot do with a dry or draughty atmosphere; it is apt to check them and is conducive to insect pests. What *O. Cervantesi* likes is a moist and cool atmosphere all the year round, with a free circulation of air on all possible occasions. It is quite a mistake to throw the house widely open in very hot, dry weather, when the outside temperature is above what it should be inside. At this time of year it is better to air very freely early in the mornings, and later on lower the blinds and keep the house somewhat close. At night, too, the house may be freely ventilated and the floors and stages well damped the last thing at night. This often causes a dew to fall upon the leaves which will be found on them in the morning, and this without a doubt is a good deal like the conditions that obtain in their native habitat. During winter the plants should hang as close to the glass

as possible, owing to their liking for light, and the roof glass must be kept clean. They are best grown in small pans or baskets well drained and in the usual mixture of peat and Moss. This should be placed firmly about the roots with a dibber, the base of the pseudo-bulbs just resting on the cone of compost. Frequent disturbance is unnecessary and harmful, leading to deterioration in the size of the bulbs and weak flower-spikes. It is wise to be on the look-out and place a little new material whenever any slight loosening of the bulbs is noticed, for a plant cannot be healthy when swinging by the roots. This and careful watering will keep the plants in health for several seasons without much disturbance, but when this is seen to be required it should be set about a once, for it is much easier to get these small growers into bad condition than to restore them to health. *O. Cervantesi* was named after Mexican professor of botany by its discoverer, but was not introduced to British gardens until 184

**Rodriguezia planifolia.**—This is a pretty little plant I noted in flower this week, not unlike *R. secunda*, but rather different in habit and having blossoms of a rosy crimson shade. They are produced very freely on short side-spikes, although small individually, make a pretty show. Not being a very vigorous plant, it may be given small pots or pans or even blocks, provided the are well looked after as regards moisture, but in any case about an inch of compost over good drainage is ample.—R.

**Cypripedium polystigmaticum.**—This fine hybrid I noticed in flower during the week. It is a cross between *C. Spicerianum* and *C. venustum* and shows a good deal of the former fine species in form and colour. The dorsal sepal is whitish with the line as seen in *Spicerianum* and a purple venation. The sepals are greenish at the base, with small black dots, shading to reddish brown and purple, the lip being rather pointed brownish, with a yellowish tinge in front. It is a free grower, thriving well in an intermediate house.—H. R.

**Masdevallia Davisi.**—In its best forms this species takes rank with the finest of garden Orchids, the rich orange-yellow being very unusual in the genus. The plant is of tufted habit, like *M. Harryana* and the leaves are each about 6 inches in length. Each flower measures near 2 inches across, and when several are open on the same plant they make a fine display. Its habitat high up on the mountains in Peru, whence it was introduced in 1873 by Messrs. Veitch, and named after their collector who found it. It thrives under cultivation in a cool, shady house during the summer.

#### SHORT NOTES.—ORCHIDS.

**Cypripedium Trianowskyanum.**—This is a free, strong-growing *Cypripedium* and a very tall flower. It is the result of crossing a good variety *C. insigne*, possibly *Chantini*, with *C. lo*, and much resembles the former species in shape. The dorsal sepal is broad and handsome, the long wavy petal bright purplish rose with hairy edges, the pouch brownish-purple, the whole flower glossy and shining.

**Zygopetalum Mackayi.**—I noticed some very fine spikes of this plant in one of the groups at the Bury St. Edmunds show recently. It is a useful free flowering old plant of which many fine specimens exist up and down the country, not so much in plantations as in old-fashioned collections of stove plants. It thrives well under stove treatment and should be grown by all who require choice flowers in winter.—H.

**Miltonia Roezli alba.**—This is a very charming and beautiful Orchid, the yellow centre enhancing the beauty of the white, nearly all pure white species varieties having rather a dead look about the specimens that produce a dozen or so of the flowers are very handsome. Such an one I noticed at the week. *M. Roezli* and its variety require more heat than *M. vexillaria*, and should be grown in medium sized pots in a good substantial compost.—R.

## COTTAGE GARDENS.

THROUGH the beauties of rural England are many and diverse, there are few that afford such sense of pleasure and restfulness as a picturesque cottage garden. There is no straining after effect, no undue exactitude in the composition of these little plots that come upon one accidentally, as come all the sweet surprises of life, on rounding a turn in the village road. Some of them are very small, for beauty is not synonymous with size; but one sees at a glance that the owners love their flowers. Love and a little labour are all that the cottager has to give; but, as with the widow's mite, the work of his offering is not to be measured by its intrinsic value, and the flowers themselves evidently appreciate this fact, repaying the labourer who, after a long day's work, mounts the rickety

porch, festooning the white-washed walls and thatched eaves, or clambering up the gable to the very chimney.

One of the chief charms of the beautiful pictures afforded by some cottage gardens is that the details are few. No extended system of beds stocked with multitudinous varieties of plants, evidencing the care of a well-trained staff of gardeners, but a few flowers, sometimes only one or two sorts, growing unrestrainedly, and as if planted by Nature.

In one garden a large Apple tree in bloom stands before the porch. Beneath the tree a wide bank of purple Iris is blossoming; the effect is perfect; nothing more is wanted. Here, in the time of the Roses, "It hastes, it wastes, the month of the Roses." The walls are covered with the flowers and buds of Rêve d'Or and Maiden's Blush, while a great bush

of Myrtle bushes, and the Myrtle bushes, throw up tall spikes of flower between the Myrtle bushes.

As I write, a recollection comes of a still evening in early summer after a day's rain. The sky was clear of clouds, and the sun sending level rays between the tree trunks as I leant over the gate of a cottage garden whose proprietor had gone away for the day. The moist air was full of the scent of double Rockets and Sweet Brier, on the leaves of which the rain-drops still glittered. The martins were flying to and from their nests beneath the eaves, the cuckoo calling in the orchard below, and the thrushes singing from the Elm tops. It is only on occasions such as this, few and far between in the rush of the present day, that the presence of the Soul of the World becomes an assurance.

In these times the decadence of thatch as a roofing material is so marked that it is a difficult



A Devonshire cottage and garden. From a photograph by Mr. S. W. Fitzherbert, Torquay.

adder to nail in the shoots of his climbing Rose, and the old dame who, with the help of her little grandson, waters the Pansies from the cracked earthenware jug with no niggard hand. To his credit, be it said, it is mostly the old-fashioned flowers that the cottager affects. The old Crimson Clove, with its absolutely satisfying scent, often grows there with a luxuriance and hardiness unknown in the spacious parterres of the wealthy. The white Lily, the emblem of purity, the Lily of the Madonna and of the Annunciation —

The wand-like Lily that lifted up  
Like a Mænad its moonlight-coloured cup,

reserves the perfection of her beauty for the gardens of the poor, while the Rose never seems so happy as when garlanding a cottage

of the old Cabbage Rose by the gate greets the wayfarer with its perfume. Here a *Maréchal Niel* produces year by year its splendid golden blooms. Here one side of a cottage is wreathed with odorous Jasmine, a mauve Clematis threading the thick growth, in which the spotted flycatches have made their nest, mingling its blue stars with the white clusters of the Jasmine flowers. In this garden a giant Lyre flower (*Dicentra spectabilis*) grows, a good 5 feet through, a model of symmetry, its long racemes of rosy hearts (the Bleeding Heart, the cottagers call it) swaying with every breeze. In another a *Wistaria* rambles up to the latticed windows, and the white Pinks that edge the path from porch to wicket fill the days with fragrance, while clumps of *Campanula grandis*, both purple and white, and, later on, the Chimney Cam-

matter to find a cottage roof where slates or tiles have not replaced reed, but the subject of the accompanying illustration lies in a village which, though but ten minutes' walk from the station where the London express stops, is untouched by innovation. The old thatched cottages, in their setting of Elm trees and orchards, stand back at different angles and distances from the winding road, each with its little garden and its speciality of flowers, while in the spring the valley is filled with the fugitive beauty of Lilac, Laburnum and pink Thorn. S. W. F.

Torquay.

**A new way of watering avenue trees.**— We have recently seen at Berlin the trees planted on the new boulevards and avenues growing vigorously and, apparently, well attended to.

With the exception of the celebrated Lime trees of the old promenade Unter den Linden, where the ground in the centre has never been renewed and where nothing is done beyond replacing dead trees from time to time, the trees under municipal control are well looked after. These trees do not shed their leaves so soon as the trees at Paris, the mean temperature in summer being lower at Berlin than it is with us. All the side walks are not composed of impervious asphalt, but many of them are made with a road metal which allows the rain water to sink through its interstices. Besides the waterings which are given in the basins hollowed out at the foot of the trees, as at Paris, the following plan, which appears very suitable for large towns, has been devised: Around each tree and at some distance from the base of the stem small well-like excavations are made, and the inside of each is lined with earthen tiles, the sides of which are perforated with holes. These tiles are set vertically, their ends being closed with plates of cast-iron like those used for stopping up the ends of water pipes or gas pipes. When the tree is to be watered, the well-like excavations are filled and the water is thus distributed exactly on the outside of the circle, where the rootlets of the tree occur. In this way a saving of water and of labour is effected.—*Revue Horticole.*

## FLOWER GARDEN.

### WATER LILIES.

THE appreciative note from Mr. Greenwood Pim respecting these lovely flowers, particularly his request for the experience of others with the varieties of *N. odorata* and the hybrids raised from them, has induced me to pen a note *re* the family in general, and combine therewith the results of my observation.

In the early part of 1896 I was favoured by the publication in THE GARDEN of a few somewhat emphatic notes regarding what I concluded to be essential conditions for success with these Lilies, although the primary object of those notes was an endeavour to point out the fallacious ideas existing that *Nymphaeas* would thrive anyhow and anywhere in water. I do not remember on what date these notes appeared in THE GARDEN, but I recollect the circumstance that they followed immediately after Mr. Greenwood Pim's eulogistic account of his first experience of the hardy members of the genus. Perhaps it may interest to repeat the opinions expressed respecting these varieties of *N. odorata* and the hybrids with an infusion of *odorata* "blood," and to recapitulate the principal points of those notes.

In the summer of 1894 I planted and flowered what I thought was at the time a comparatively unknown hybrid in *N. o. caroliniana*, and, personally, considering it amongst some two dozen species, varieties, and hybrids of *Nymphaea* and *Nuphar*, to be the most beautiful I had flowered, I endeavoured to draw attention to it in the notes I forwarded, adding to my opinion of its beauty the provision that it required additional seasonable warmth which I believed absolutely necessary for all the varieties of *N. odorata*.

Probably a description of the conditions under which these *Nymphaeas* were grown will afford a better idea of how varying were the circumstances conducive to their welfare; first, an open pond some 9 feet below ground level, made by enlarging and dredging a disused gravel pit. This pond, some 50 yards by 10 to 15 yards, had a level of water which was constantly fluctuating, owing to percolation through its gravel bed of the outer river water; consequently, owing to this subterranean circulation, the temperature of the water supply was always

varying. In this various native aquatics were more or less at home, particularly, on the sunny side, *N. alba*. The Cape Pondweed thrived surprisingly, but our native species of *Villarsia*, collected by myself in its Thames home from 9 feet depth of water, was never in such happy condition as in the river bay where it was luxuriant. In this pond I planted eight or nine divisions from my first plant of *N. M. Chromatella*, but they were scarcely recognisable compared with the original in position—No. 2. My first plants of the finer and less common aquatics were accommodated in an open break of water between a somewhat elongated concreted bog bed, the water supply of which was utilised for the working of a very small spray fountain. In this, *N. Chromatella* grew magnificently. *N. alba*, sent to me as *N. candida*, flowered profusely, and its seedlings appeared literally by hundreds in its second season. *N. odorata* never seemed to thrive at all; its variety *rosea* grew well, but never flowered, and the same may be said of *N. o. sulphurea*. The Pickerel weed, planted round the base of the fountain, grew rampantly, likewise our native *Bladderwort*, *Villarsia*, *Water Soldier*, and *Frogbit*; but one thing I could not fail to notice was that the longer time the fountain was stopped—although its capacity was less than three gallons per minute—the better these aquatics seemed to thrive, and this circumstance led me to infer that higher temperatures were necessary for some of these plants, *Nymphaeas* in particular. With the object of obtaining this essential, a third tank was made. This tank, about 60 feet in length by from 12 feet to 16 feet in width, was made in a position assuring the power of every ray of sunshine, a position where, on the northern side, shelter—a great help to good results—was afforded by tall conifers and a 10-foot wall not far behind them. On the bottom of the tank, from 1 foot to 1½ feet of turf with a small quantity of manure added was placed, which allowed when the tank was full from 1½ feet to 2 feet of water above the crown of the plants. In this provision there was nothing different from that adopted in the first planting, except, probably, slightly more shelter, but in the subsequent treatment of these Lilies I believe I found that which may account for the vast improvement they made, and in which also Mr. Greenwood Pim may discover the reason why the *odorata* section in particular fails. I do not wish to leave an impression that the treatment I adopted will so alter the nature of some of these varieties and hybrids that they will vie with such as *Chromatella*, *Laydekeri rosea*, *pygmaea* and its offspring, *Helvola*, in freedom of flowering. It would be unwise to do so, recognising the fact that some of the species are not profuse in flower, and that a transfusion of blood of two species of similar character, although producing a variety of coloration, may not always be conducive to a prolongation of the flowering of their offspring.

If I remember rightly, I planted directly into the soil some fourteen different kinds, maybe one or two in duplicate, in this tank, and after allowing them to start in about a foot of water the tank was filled to its utmost capacity, and during the whole of that, a roasting, summer the only additional water which was allowed intentionally to enter the tank was admitted with the sole object of replacing that evaporated by solar heat; moreover, this fresh addition was always thoroughly sun-warmed before its admission from tank No. 2, on a somewhat higher level. It is obvious from this that my object was the retention of all possible warmth by excluding water of a much lower temperature than that contained therein, and how far

I succeeded may be judged from the fact that, although I never made a record of the temperature, there were days during which the upper portion of the water was positively hot, a condition which would have been impossible to obtain with a current of colder water constantly flowing through.

Now, as to the growth of the particular *Nymphaeas* which had failed in tank No. 2, I moved *N. o. rosea* and *sulphurea* into this new position, where, without the occasional playing of so small a fountain, before the summer was past *sulphurea* was almost as robust in foliage as *Chromatella* and had flowered profusely. *Rosea*, too, had grown amazingly in comparison with what it had done, and surprised me with the number of flowers it bore. Marliac's selected *sulphurea* variety *grandiflora* bore the largest *Nymphaea* flower I have seen in its first season in this tank, where the massive yet beautiful flowers of *carnea*, *albida*, and *rosea* were revelations in water garden progress. *Chromatella* did not equal in its first season the original plant under the other conditions. *N. o. rubra* and *exquisita*, very small when received, made fine plants and flowered well before the arrival of cooler weather; while the almost crimson *Laydekeri rosea*, *pygmaea*, and *p. Helvola* surprised with the profusion of their flowers, and under these conditions *N. caroliniana* impressed me as the prettiest Lily of them all.

It may seem strange there were two plants of the rose variety of *N. alba* included in the planting of this collection, which, much as they might be acceptable owing to their price and comparative rarity, were by myself greatly begrudged the room they occupied, lacking, as they did, any claim as water garden ornaments; yet I am convinced that, although heat is an essential in the growth of some, these particular varieties would have displayed their characteristics more fully in cooler quarters. They would have been more at home in association with the typical *N. alba*. As to the

### HARDINESS

of these Lilies, there can, in my mind, be no doubt if this warmth in season is afforded them, or if something like a steady water temperature is aimed at, for I believe there is something in this conducive to what I may term a ripening process in their particular way. If we recognise such a condition of growth in vegetation on terra firma, why not in aquatic life? though I confess it difficult indeed to say whether some of these hybrids rest at all during a mild winter. However, the fact remains that Mr. Greenwood Pim tells us of the failure of *odorata* vars. to survive in water constantly agitated and, I infer, fluctuating in warmth. For my own part, so far from chronicling a loss, I can say that I could have stocked three or four more tanks with divisions of these plants the second season after planting with the exception of *Laydekeri rosea* and *pygmaea*, which, as is well known to cultivators, are not prolific in affording offsets. The only loss I can record was the non-survival of *N. odorata*, which I left in tank No. 2 during the frost of 1895, and, by the way, masses of Pickerel weed were killed in the same place, but not a plant was injured in the place where these Lilies were also untouched. *N. pygmaea*, *N. sulphurea* and *N. Chromatella* I have had frozen into, as one might say, solid blocks, not by design, and I could not see that they were affected.

It has been my experience to see these *Nymphaeas* in every conceivable condition, thriving in sunken tubs, languishing in running streams, and I have seen the survivors of a small collection which were thrown into something very

like a well, but I can honestly say that nothing gave better results than the "dead" water system, not even the protection of a tropical house, as at Kew.

Although circumstances have placed me in, to use a parliamentary formula, "another place," and I am not in contact with these lovely lilies, I shall always be pleased, believing as I do in the possibilities of a future water garden, to advise their cultivation and to deprecate the idea that aquatics require to be deluged or, as have observed, planted under an arboreal umbrella.

J. BLENKINSOP.

Wateringbury, Kent.

CONTINENTAL NOVELTIES.

M. ERNST BENARY includes among his novelties the following, descriptions and illustrations of which we herewith give from his catalogue :

**LEPTOSYNE STILLMANI** (ASA GRAY).—This beautiful Californian annual comes from the Sierra Nevada where it (seed of which has not hitherto been offered) grows at a height of from



Anglonia grandiflora alba.

4000 feet to 6000 feet. With graceful thinly-cut foliage and growing about 1 foot high, the habit of the plant is bushy and compact, and each of the numerous flower-stems is crowned with a splendid golden-yellow blossom, of elegant shape and over 1½ inches in diameter, which remains five to six weeks in full beauty. A characteristic of this Leptosyne is that it blooms from four to five weeks after sowing, surpassing in this respect almost every other annual. It is best to sow in the open air in sandy ground in a sunny situation. This fine Leptosyne will be found excellent for cutting and making striking groups.

**MYOSOTIS PALUSTRIS** TOM THUMB. This is quite a pigmy form of the widely known Marsh Forget-me-not, the plants forming little tufts, like *Spergula pilifera*, from whence springs an abundance of delicate sky-blue flowers. It

comes true from seed, blooms uninterruptedly from May until frost comes, and is admirably adapted both for borders and for pots.

**ANGELONIA GRANDIFLORA ALBA.** The type is a graceful sweet-scented greenhouse plant and bears lilac flowers, which appear the same season as the seed is sown. The white variety is far more beautiful than the type, its extremely numerous pure white flowers standing out in handsome contrast with the elegant dark green lanceolate foliage. This beautiful new plant is especially adapted for room or conservatory decoration, being a good winter bloomer, and it also makes a charming ornament for the table.

**Cactus Dahlias.**—In THE GARDEN for November 20 (p. 401) W. E. Endicott writes as to confusion caused in America by the tendency of exhibitors regarding the decorative Dahlias as Cactus varieties. As he is anxious to remedy this condition of things, he inquires for a list of true Cactus Dahlias. The following is a list of true Cactus Dahlias drawn up for 1897. As so many new varieties are sent out every year, this list will be subject to annual revision: Annie Jones, Apollo, Beatrice, Beauty of Arundel, Beauty of Wilts, Bertha Mawley, Blanche Keith, Charles Woodbridge, Countess of Gosford, Cycle, Delicata, Earl of Pembroke, Ernest Cannell, Fantasy, Fusilier, Gloriosa, Harmony, Henry Stredwick, Iona, Irene Cannell, J. E. Frewer, Juarez, Kaiserin, Keynes White, Lady Penzance, Mary Millier, Matchless, Mayor Haskins, May Pietor, Miss A. Nightingale, Mrs. A. Beck, Mrs. A. Peart, Mrs. Barnes, Mrs. Francis Fell, Mrs. Gordon Sloane, Mrs. H. Cannell, Mrs. Leopold Seymour, Mrs. Montefiore, Mrs. Wilson Noble, Professor Baldwin, Purple Prince, Robert Cannell, Royal George, Starfish and Violet Morgan. — C. F. KEEP.

**Imported Lilium auratum.**—Immense numbers of the golden-rayed Lily reach this country from Japan. The earlier importations if sound realise, as a rule, good prices, but as a set-off to this must be taken into consideration the fact that the attempt to get them here early sometimes results in the loss of a considerable number, if not the whole of the importation. This year a large quantity was announced for sale on November 10, but upon opening them it was found that they were in too bad a state to offer. Such being the case, the importation disposed of on November 30 must be considered as the first of this season. The bulbs taken altogether were in a very satisfactory state. In a general way, however, the earliest bulbs are not the best, doubtless owing to the fact that they are not allowed to ripen thoroughly before packing. Such being the case, although an advocate of the early potting or planting of Lilies, I feel sure that of those imported from Japan the bulbs obtained about Christmas are likely to prove more satisfactory than the earlier ones.—H. P.

**Solidago virgaurea nana.**—This is mentioned on page 453, and it fully deserves the favourable notice there taken of it. It is sometimes offered in catalogues with the addition of *compacta*, which is, though true, superfluous. It must not, however, be confused with the *S. virgaurea* var. *cambrica*. I have collected dwarf specimens on ledges of rock high on the mountains of North Wales, which in cultivation either exalt their stature or produce seed which does so, and I have been doubtful whether these have really been var. *cambrica*, though that variety is said in Sowerby to grow on ledges of rock on mountains in North Wales. What I believe to be the true var. *cambrica* grows abundantly in the valley of the Lledr, near Bettws-y-coed, and has been sent to me from there by Mr. Buxton, Bettws. It is, however, not only less dwarf than var. *nana* of gardens, but bears its flowers rather in spikes than in panicles. The var. *nana* came to me at least twenty years ago—I think from Mr. Harpur-Crewe under the name of *Cineraria alpina*, and I soon found it to

be a valuable rock plant, though the name was corrected for me on the best authority. It differs from var. *cambrica* in being never more than 6 inches high, in flowering very early, beginning in May, in having a broadly-branched panicle, very full of flower, and in coming quite true from seed. It is one of the best of plants for alpine rockeries. I may add that it hardly increases its stature even in a border of rich soil, but becomes more leafy and less flowery.—C. WOLLEY-DON, *Edg. Hall, Malpas.*

FLOWER GARDEN NOTES.

**PLANTING HERBACEOUS BORDERS.**—The best way to plant borders of hardy flowers, that is on a large scale, when the object is to provide a



Myosotis palustris Tom Thumb.

general mixture of things, has often been discussed in THE GARDEN, but it may not be out of place to offer a few remarks on the subject at the present time when in the majority of places any such work that has been contemplated will doubtless be in full swing. I note above in the majority of places, because there are objections, and naturally as an outcome exceptions, to autumn planting, notably on stiff, heavy land where it is pre-



Leptosyne Stillmani.

ferable to incorporate a goodly proportion of lighter material with the natural soil and turn it up, leaving it in the rough to be pulverised by frost, planting as early in the new year as the ground is workable. Here, on the other hand, with a light soil and sand not far from the sur-

face, I find autumn planting much the best, a recognised rule also being to plant firmly and to mulch at once and heavily. The desirability of any regular edging of flowers will depend on the natural edging of the border: if it is grass, nothing more is required, and the respective clumps of dwarf plants can come down to the same. If, however, the borders are in the kitchen garden and the walks are edged with tiles or material of a similar nature, then I think a live edging just inside the tiles is advisable, and have personally used for the purpose the old double Chamomile, the green and silvery Sedums, and the two forms of Ajuga reptans, from all of which spring in the early season masses of Crocus in different shades. The only objection to a dense edging of this description is that weeds are troublesome, but a good cleaning twice a year in late autumn and spring is generally sufficient to keep them under. If the borders are of good size, say 7 feet or 8 feet across, the several clumps can be large enough to show off the different plants to the best advantage, 4 feet in length by 2 feet 6 inches in depth being a very good size. Carnations, Pinks, dwarf Campanulas, Veronicas, Tufted Pansies, Iberises, and Linums are among the plants that can be utilised to form the first set of clumps, remembering that if a good display is the principal consideration, well-known plants that can be depended on to give a mass of bloom and to last out well alike in flower and foliage are preferable to others that may be more rare, but that either do not flower so freely or that are comparatively short-lived, whilst with the same end in view the planting should be fairly close rather than thin. Objection is sometimes raised to planting bulbs on such borders, but I think occasional clumps of early-blooming things should be admitted, as they help to make the border bright when other flowers are scarce. They should be planted deeply, and a batch of some dwarf annual, as, for instance, Portulaca, raised to plant on the surface when the bulb foliage is gone. The number of species available for selection for the central part of borders, those for instance that range from 2 feet to 4 feet in height, is so large, that it is impossible to enumerate them all. A few indispensable are the dwarf Phloxes, Pyrethrums, Pentstemons, Lobelias, some varieties of Lupins, Lychnis, Coreopsis, the dwarf Starworts, and others, the selection, it will be seen, being based on the same principles as for the dwarf subjects, and the clumps may be of the same size, or perhaps a trifle larger. The inclusion of such moisture-loving plants as Spiraeas, Irises, Trolliuses, and the like will depend entirely on soil and situation. They are nothing like so satisfactory with me on the open border as in a damp, partially-shaded place, nor does extra attention in the way of a stiffer compost with heavier mulchings benefit them to the extent required. A little care is necessary in the formation of the central portion of the border to see that these clumps are in keeping with the dwarf subjects immediately in front of them and the taller that are to come behind, also to distribute the various flowering seasons well—that is not to group several species or varieties of the same flowering season in close proximity, or the result will be occasional big gaps in the otherwise continuous show of flower.

In case of acquiring occasional plants that are quite or nearly—at any rate, so far as the herbaceous border is concerned—the sole representatives of a species, put them on some small, snug border that has been specially prepared for them until the stock can be increased—such things, for instance, as Stokesia cyanea, Romneya Coulteri, Senecio pulcher, and Tiarella cordifolia. No difficulty is ever found in providing for the back of borders, the many varieties of Starworts and Helianthus, together with Solidago, the varieties of Chrysanthemum maximum, and similar things furnishing a plentiful supply: it is well, however, to give the reminder that with the number available the best things should be selected to the exclusion of rubbish. In connection with all the

species named for different positions, it is gratifying to note the ease and rapidity with which they can be increased either by cuttings, layers, or division, and this is a point worth remembering when planting on a large scale is contemplated, especially if a start is being made with hardy flowers and everything has to be purchased. Under these circumstances I have heard the remark on more than one occasion, "We had no idea that a collection of hardy plants would cost so much." The remedy, as indicated above, is easy to find. Planters should anticipate their wants, and, instead of purchasing plants to fill large borders throughout, should acquire in the previous season something like one-tenth the quantity of each particular species or variety required, plant them in some well-prepared border, look after them thoroughly well, and, from the time Carnation layers and Pink pipings or layers are ready, be busy propagating. It is astonishing the amount of plants one can obtain in a season in this way, all, too, without protection in the way of glass or cost in fuel, save, perhaps, a cold frame and a few mats to keep out frost. The greater part thus obtained may not be ready for planting until the following spring, but it will be good stuff, flowering well the first year.

Claremont.

E. BURRELL.

#### NOTES ON HARDY PLANTS.

**Pyrethrum uliginosum.**—Referring to "J. C. B.'s" remarks (p. 400), he takes quite a wrong view of what I said about this coarse-growing plant, and for once I must reply by way of argument. We all know about the vigorous habit of the plant; indeed, it may be said to be a plant that will grow anywhere. Further, my remarks implied that the very vigour of the plant was the cause of the want of flowers—good flowers—which was the one and almost only point of my note. If "J. C. B." will read my note again, he may find out his error, for obviously no one who has grown the plant could ever write about the want of root vigour of this plant. I scarcely need say that my notes are written with the assumption that GARDEN readers know ordinary plants and their habits; hence it was not needful to mention the habit of this plant only in relation to the fact of occasional failure of its usual fine late crop of flowers.

**Polygonum sphærostachyum.**—It may be to the advantage of this plant, and I feel sure of some interest, to give my experience of this rare and lovely Knotweed. Whilst I know many have failed to keep it, perhaps more have failed to grow and flower it well for a number of years in succession, *i.e.*, the same individual. Here it flourishes year after year, seeds well—well in the sense that it germinates freely when sown in pans—so that I am never without plenty of it. Far be it from me to claim any special skill, but to make this note practical I give also the conditions under which it thrives. Almost the whole secret, if it is one, is told when it is said that here it is treated as a bog plant; the soil loose and springy. A sunny place I think in connection with a damp root run is to its advantage. Three-year-old plants flower all the summer. I find, however, that the earlier flowers yield but little or indifferent seed, and I never collect it now, but depend on the midsummer flowers. Seed, well ripened and sown at once, often germinates in the autumn. That, however, is inconvenient if one cannot grow the plants on, which implies housing the pans. So I now take the spike entire and leave the seeds in the husks, so as not to get scorched when placed in the sunshine. This plan, I have fancied, retards germination, as well from the mere lapse of time as by the harder ripening of the bulky seeds. I consider this of some importance, because when you have got what seems to be, and really is, a lot of good seed, if it cannot be grown before winter into what I may term a perfect (if small) plant, it simply dies. What I mean by a perfect plant is a plant so much and timely grown, that you get the tuberos development of the root in which to

carry the life germ through the winter. I took the hint as to the preferences of this plant from the behaviour of my original plant of ten or more years ago. With all plants the knobby root grow long or somewhat rhizomatose in the form of a turned-up pot-hook or the letter J, the shorter turned-up limb being the thicker and sprouting point, and in time I have seen the longer upper point rise above the surface in a attenuated condition. This habit suggested to my mind that the plant loved a moist, but rich vegetable soil and to dwell near the surface, and I am now quite sure moisture and humus suit it, and that an annual mulch of rotte leaves may induce it to get stronger year by year. I may also add that I have propagated by root division. This I did before I found I could rely on good seed every year. My plan was to bar the root-stock of the stronger specimen, which then grew in the gutter of a bed on grass. Several cuts half way through the rhizomes were made on the under side about June, the soil was replaced, and by the following spring the sections were found to have each an eye or break. At that time they were broken asunder and planted separately, and with the summer before them they furnished me with my first batch of stock. This plant flowers with me from June to November—at least it has done so this season.

**Polygonum amplexicaule.**—The Rev. Mr. Wolley-Dod states this is, I think, almost as fine in colour as the above rarer species, the spike being bigger and rather more lax, and until a few days ago it was abundantly in flower, having been so from July. It is the habit of this species that makes it so unfit for the more conspicuous border, and yet you cannot easily find more useful material for cutting. The carmine-red in itself is at once effective, pleasing, and uncommon; the spiky form of the flowers fits them so well for vase work. It is one of the most telling things for the Michaelmas season. Unfortunately, very different plant often does duty for it in trade lists, a tall plant with very late white flowers. I have experienced these errors with both home and foreign nurseries.

J. WOOD.

Woodville, Kirkstall.

#### NOVEMBER IN THE GARDEN.

TO-DAY has come the first touch of winter. A keen wind blows from the north-west, a shower of sleet has just swept by, and the sun breaks from beneath a cloud, while the last golden leaves on the Apple boughs glisten against an inky sky, and the stems of trees, Lichen-clad and still wet, gleam in the sun's rays. Now that the wind brings with it the surge of the waves as they beat on the shore we count as joy gone from us the days of gentle air and pleasant sunshine with which until now November has unfolded us. Only last week the feathery Bamboos were swaying in the soft south wind. The night breeze was fragrant with the blossoms of the white Nicotiana, a thrush was singing in the wood, and the starlings were sounding their tiny castanets in the tree tops. Let us look around the garden and count our treasures ere they are hidden from our sight by snow wreaths.

Brightest of all with their firelight glow are large groups of *Schizostylis coccinea*. These have been sending up their spear-like blossoms for the last two months, and are now radiant masses of bloom. When torn ruthlessly asunder every couple of years or so in spring-time and replanted in clumps 2 inches or 3 inches between each divided portion, the increased vigour is remarkable. Treated thus, the spikes of blossom are tall and strong, and continue in succession for a considerable time, lighting up whatever part of the garden is fortunate enough to possess them in the darkened daylight hours of winter. In replanting,

some leaf-mould or well-decayed manure should be added to the soil, and sand if necessary, as they flourish best in rich, friable ground where they will find moisture in summer. Next to the *Schizostylis* in brightness come the *Fuchsias*. The various hardy species of these planted permanently in the borders are beautiful in autumn until cut off by frosts. Their persistent glossy leaves bear the rude winds without harm, and their charming blossoms glisten in the sunlight with a most delightful freshness, for ere it withers the habit of the *Fuchsia* is to let fall each dainty flower. Permanent beds of *Fuchsias* might well be made with bulbs planted among them, so that they would be gay in spring-time before the *Fuchsias* are well awake. Some leaf-mould spread round their base will protect the roots from frost, and should the stems be killed by the winter's severity, when cut down in spring-time they will sprout again from beneath.

The Monthly or China Roses, the old favourites of days gone by, are well in blossom still. They are a lovely race, quite a garden in themselves, and the only really "perpetual" Roses we have, as there is hardly a month in which you will find them without either bud or blossom, and their shining evergreen leaves are so cheerful in dull, wintry days. The pink Monthly Rose is the one best known, never failing to give us the earliest and latest bunch of Rose buds. But besides this well-known favourite there are many other varieties of vivid hue crimson, carmine and rose, and some with a blue metallic lustre in their leaves which is lovely in itself, even if they never added a Rose to the picture. As well as their constant habit of bloom, the China Roses possess a power of endurance which does not belong to the hybrid varieties. This fact is proved by their being found still healthy in old gardens, where it is known they were planted fully half a century ago. As they do not require the gross feeding of other Roses, they make good permanent beds, and among them spring bulbs can be planted with success.

The early *Chrysanthemums* are just over. The yellow kinds, such as *Gustave Wermig* and *Mrs. Burrell*, were beautiful among the *Asters* and *Michaelmas Daisies* and beside the great white *Daisy* (*Pyrethrum uliginosum*) and the starry *Marguerites*. Now the bolder crimson kinds, such as *W. A. Holmes*, are in bloom and light up marvellously at eventide, touched almost to fire by the sun's last rays.

Just gone from us also are the blue African *Lilies* (*Agapanthus unbellatus*). The wet summer was much to their liking, the flowers being plentiful, as many as sixty-six flower-heads being in bloom together in the two beds. The lasting power of these *Lilies* is valuable. The beds were quite beautiful for two months, and the flowers when cut just as they are expanding will last fresh for some weeks. The beds in which they grow have been undisturbed for several years, but each November the *Lily* stems are well covered up with leaf-mould and some branches of *Yew* stuck among and bent over them as protection from the frost. In the month of May, when the *Yew* branches have been gradually all removed, plants of the blue *Daisy* (*Agathæa ecclesiæ*) are placed among the *Lilies*, as they come into blossom much earlier and are of the same lovely shade of blue.

But if the *Lilies* are gone from us, we have still some bits of "true blue" in the garden. The flowers of *Plumbago capensis* nestle amid their leaves, that bear the ruby touch of autumn. Over the perennial *Flax* its blue butterfly blossoms yet hover, and on *Salvia patens* are yet blossoms clinging like blue

perennants to a mast. *Doronicum Harpur-Crewe*, divided in spring-time, has now a second crop of flowers much larger than the earlier flowers; in fact, they measure 4 inches across, and if cut when just expanded, last well indoors, where their gold rays are precious in the shortened hours of daylight. To ensure this fine autumn growth, the old flowering stems of early summer should be cut or pulled away, so that all the vigour may go to the forming of fine young crowns. Annual division is also needed to have this plant in perfection.

On the garden wall hangs the winter *Jessamine*, its drooping sprays like a shower of gold, down which the blossoms creep. This *Jessamine* requires freedom of growth to look its best, and as it bears its finest flowers on the fresh shoots of the year, it should be pruned just after flowering, before new growth begins, and then it needs only the removal of superfluous wood.

The *Myrtles* are still in flower. *Choisya ternata* has an autumn bloom, while at our feet the *Christmas Roses* are uprising and *Violets* and *Oxlips* are in blossom, so the garden, at least, bids us forget that we are within two days of bleak December. A. L. L.

#### DISEASE IN LILY BULBS.

My attention having been drawn to an article which appeared a few days ago in one of our daily papers, I should like to say a few words regarding this so-called Lily disease (*Rhizopus necans*) referred to in the *Kew* bulletin. This disease has been known as long as *Lily* bulbs have been exported from here, and the results have been sometimes very disheartening for the consignees as well as for the shippers, but of losses like those referred to in the article before me I have never heard. I imagine that the great loss is probably the result of some Japanese or other speculators, in order to catch best and fancy prices, shipping at the wrong time of the year. The climate of Japan is such, that during and after the hot and sultry summer months, July, August, and September, during which we have from 85°-95° Fahrenheit, the rainy season sets in which produces—easily imaginable—a real hothouse temperature, the air being saturated with moisture, which is splendid for growing, but not for harvesting field products. The moisture is so great, that not only out-of-door things get affected by fungoid formations, but even in our houses—clothes, books, shoes, &c., in short, everything which is not in daily use.

It is, therefore, easily imaginable that during such a season, bulbs taken out of the field and imperfectly ripened, if packed into boxes and shipped through the tropics to Europe, must be affected by fungi, which have during a two months' voyage on board a steamer, sometimes close to boilers, sufficient time to do their deadly work. The danger would not be so great if the bulbs could be brought from the fields into the boxes without injury. This seems, however, impossible. Even with the greatest care, with such tender articles, a little injury to their scales is unavoidable. This is generally the beginning of the fungoid diseases, which very soon take hold of the whole bulb. However, after this sultry weather the autumn season sets in during October, with fine dry days, warm during the daytime, but brisk and refreshing during the night. The earth gets dried, the season for harvesting being regulated by Nature itself. The *Lily* bulbs are now perfectly ripe and dormant, and in a proper stage for export. The climate being dry and cool, any bruises the bulbs may receive during the handling will dry off and heal quickly, and satisfactory consignments will be the result. There are also a few very tender varieties which even the most careful treatment will not protect against the hardships of a long voyage through such different climates as the route over India, the Red Sea, and the Suez Canal offers.

Taken, however, as a rule, the results will be satisfactory, as I can prove by hundreds of letters and testimonials which I have received from customers.

I therefore claim that unsatisfactory results are not on account of a disease the bulbs possess when they are shipped, but simply the result of several factors which, taken all together, must ruin these lovely plants. I recommend, therefore, the following remedy: First, place your order with a respectable firm—one which knows the business; second, do not give instructions, if possible, regarding time for shipment, but leave this to the shippers, who will guard your interest and will know best the time the bulbs are ripe and the best time for packing and shipping; third, try to induce the steamship owners of Eastern lines to provide a few steamers during the principal export season, with cold storage arrangement, to get the shipments through the trials of change of climate, and I will guarantee that the bulbs will always arrive in the best of condition and not infected by any disease. A. MEYER.

Yokohama.

#### RANUNCULUS ACONITIFOLIUS PLENUS.

ONE of the most important items in connection with the success of this plant under cultivation is planting it at a seasonable time. Many plants, the more vigorous and continuous-rooting perennials in particular, may be successfully planted at almost any season of the year. There are others, however, including this plant, that should be planted at the right time. Like many other members of *Ranunculaceæ*, this pretty herbaceous kind, well known by the familiar name of *Fair Maids of France*, sends out its long tapering fleshy roots horizontally from the crown. In single tufts the roots often radiate all around the crown. When such things are replanted in full growth, these roots are usually gathered in bunches in the hand and laid into a spade-cut trench, not infrequently to perish, as little or no soil comes between them. A much better way than this would be to open a hole a foot across, and, having carefully laid out the roots in a natural way, to replace the soil about them. Better still, plant the roots as early as possible in autumn, or at any rate while the crowns still remain in a dormant condition. With the soil deeply dug and manured, a good group may be planted thus: Remove the soil to about 4 inches deep for a space of 2 feet across, or as large as the material at disposal will allow. Place in the crowns at 6 inches apart, spreading the roots out horizontally, covering again gently when all are thus arranged. If the soil be wet, much treading should be avoided, but a fair firming with the fingers about the roots may be indulged in with advantage. If a shady and quite moist spot is available, such a place will suit this plant as well as the single or typical kind. Indeed, the latter plant possesses quite a fairy-like appearance when fully established in semi-boggy places, the plants being literally covered with snow-white flowers for weeks together. E. J.

**Herbaceous Lobelias.**—When writing my note on these plants (p. 362) I had no intention of laying down the law as to their winter treatment in soils and climates differing from those in which my experiences have been gained, and have no doubt but that "A. D." is a far better judge of their requirements in his locality than I should prove. The intention of my note was to emphasize the fact that light soil and freedom from severe frost did not ensure safety to plants left to winter in the open ground, and that when I lived in a locality where both of these conditions obtained in a marked degree, I was unable to preserve the plants even during a frostless winter. In dry and wet seasons the result was the same, and I had great difficulty in keeping up a stock, although I used to winter some in boxes in cold frames, as described by "A. D." and others, by potting single suckers in 2½-inch pots and growing them in the greenhouse. In my present gar-

den, however, where, as I mentioned, the *Lobelias* are growing in damp, heavy loam close to water, and where the winter temperature has on several occasions fallen 12° below the lowest temperature registered in my former garden, the plants appear absolutely hardy. They have often been divided in October and have never had the slightest protection in the way of mulching, while they stood the long-continued frost of 1895 and 21° of frost for two nights in 1893 with impunity. Without the experiences I have detailed I should most certainly have given my vote to the light soil and warm nook on the banks of the river Dart, as more suitable to the wintering in safety of the herbaceous *Lobelia*, than the damp, heavy soil and severer frosts of probably the coldest winter garden in the Torquay district, as hardness is not induced by light soil and warmth, but is seemingly in Devonshire by heavy soil and greater cold. I should advocate others, even though they live in colder counties, experimenting with a portion of their plants by leaving them in the open for a winter, when it may be that they will give them a pleasant surprise by proving hardy under this method of culture. In cases where this method has been tried and has failed, as in "A. D.'s," I should be the last to advocate its being persisted in.—S. W. F.

## TREES AND SHRUBS.

### RETINOSPORAS.

FROM a horticultural rather than a botanical standpoint, the different *Retinosporas* alluded to on page 430 under the heading of "A False Genus" might well be allowed to stand, as cases of reversion to the normal form are in most instances so rare that they need not be taken into consideration as far as the ornamental qualities of the plant are concerned. The fact, however, that nearly all the *Retinosporas* might be traced back to two species only has been now recognised for years, and notes on the subject have from time to time appeared in *THE GARDEN*. Our botanical authorities have been by no means of one accord with regard to the position occupied by the *Retinosporas*, for while they are in the above-mentioned article and in the Kew list referred to under the head of *Cupressus*, a few years ago they were regarded as belonging to the genus *Chamaecyparis*, and one authority at least included them in the genus *Thuja*. The differences of opinion do not end here, for, while the word is generally spelt *Retinospora*, it is altered at Kew to *Retinispora*. This last spelling is of recent adoption. One can readily understand that the *Retinosporas* known as *R. lycopodioides* and *R. filicoides* are but varieties of *R. obtusa*, for they do not differ from each other or from the type to a greater extent than is the case with some of the numerous forms of *Cupressus Lawsoniana*. *R. squarrosa* furnishes in this respect one of the greatest surprises, and that it is but another stage of *R. pisifera* seems at first difficult to believe, as the comparatively long spreading, greyish green leaves of *R. squarrosa* do not appear at all related to the small scale-like foliage of the other. Instances, however, have occurred, though rarely, of *R. squarrosa* producing fruiting branches which were indistinguishable from those of *R. pisifera*.

The origin of such a form as *R. squarrosa* is to be accounted for in this way. When conifers are raised from seeds, the first leaves are long and needle-like, and in many cases they bear no resemblance whatever to the foliage of an adult plant. This character is especially noticeable among Junipers, Cypresses, and the different forms of *Arbor-vitæ*, which bear long

pointed foliage when young, succeeded by small scale-like leaves closely adpressed to the branches. In seedlings even from the same source there are great individual differences as to the time and size of the plants before they assume their adult character, some quickly breaking away from the seedling state, while others remain a long time and reach a good size before doing so. If cuttings are taken from a plant that shows a disposition to retain the juvenile character of its foliage longer than the others, they will often grow some time without showing any disposition to produce the small scale-like leaves of the adult plant. *R. squarrosa* thus doubtless originated as a seedling from *R. pisifera*, its peculiarity being the fact that the juvenile foliage only is produced, except on such rare occasions that need not be taken into consideration in estimating its ornamental qualities.

On p. 430 it is stated that all the *Retinosporas* belong to *Cupressus*, and are all forms of *C. obtusa* and *C. pisifera*, but such is not the case, as the dense growing *R. ericoides*, with pointed leaves arranged cross-ways on the branchlets, is nothing more nor less than an undeveloped form of the Chinese *Arbor-vitæ*. This has been shown in one or two instances by the production of a fruiting branch, which differed in no respect whatever from the *Arbor-vitæ*, while never by any chance has the plant in its ordinary form borne fruit.

A *Retinospora* that has caused a good deal of controversy is *R. leptoclada*, which is said by Gordon to be a native of Japan. This statement is now conclusively proved to be an error, and *R. leptoclada* is believed to have originated at Andelys, in France, among some seedlings of *Cupressus thyoides*, or *Chamaecyparis spheroides*, as it is often called. The general appearance of the plant would suggest that it is a form of the last named. *R. leptoclada* is certainly a very pretty little shrub, bright and cheerful at all seasons.

A form of the American *Arbor-vitæ* (*Thuja occidentalis*) usually met with under the name of *Thuja Ellwangeriana* is remarkable from the fact that the process of transition can be readily traced, for, as a rule, the lower part of the plant is clothed with the long spreading leaves, while the topmost branches, with their small scale-like foliage, differ in no way from the American *Arbor-vitæ*. This *Thuja Ellwangeriana* is often classed with the *Retinosporas*.

T.

**Berberis Thunbergii.**—Your correspondents do well in calling attention to this shrub, for even amidst a wealth and variety of beautiful autumnal tints it surpasses in brightness almost anything in dwarf shrubs, large groups of it on dry banks and among rocks being especially conspicuous. It takes on colour early, and if occupying sheltered positions the fading leaves are very persistent, thus making a bright display for a prolonged period. It is easily propagated; cuttings of ripened shoots inserted (now) in the open in light soil strike root as freely as Currants.—J. R.

**Desfontainea spinosa.**—The illustration of this charming Chilean shrub as growing in Major Gaisford's garden, Offington, Worthing, which appeared in *THE GARDEN*, January 16 of the present year, is sufficient to make one long for such a climate as that of this well-known southern watering-place, for the *Desfontainea*, which is now in bloom in several places, is in this stage totally distinct from any other shrub that we have, though when out of bloom it might readily be mistaken for a variety of Holly. Where it is not sufficiently hardy this *Desfontainea* may be treated as a greenhouse plant, but it is not very amenable to pot culture, though if plunged out of doors when frosts are over and allowed to re-

main till the autumn it will, as a rule, succeed fairly well. Of course, regular attention in the matter of watering and other details will be needed. The flowers of this *Desfontainea* are drooping, nearly a couple of inches long, and of a thick wax-like texture, their colour being bright scarlet, tipped with yellow, somewhat after the manner of a *Blandfordia*.—H. P.

**Autumn tints.**—One point that may be useful to "K." (p. 385) in the planting contemplated is that indigenous trees are finer in their autumn dress than exotics. There are exceptions, but this may be taken as a rule. I mean, for instance, that, given a score of exotic trees in variety, the majority would not produce autumnal effects approaching those to be seen on the Oak in great variety, Beech, Birch, and others. So far as the autumn leafage is concerned, the exotics are mainly represented by two types, those whose foliage is tender and comes down wholesale with the first frost, say of 10°, without much change of colour, and others on which the leaves are long retained, but are ultimately shed without putting on anything in the way of bright colour, the *Pterocarya* and *Gymnocladus* being examples of the former, and the *Wistaria* and *Judas Tree* of the latter. In cases where the foliage changes and is fairly well retained I have noticed that the prevailing autumn tint is either very pale yellow, as in the *Salisbury*, or a dull, dingy brown, as in the *Cucumber Tree* (*Magnolia acuminata*) and the *deciduous Cypress*. There are a few foreign trees that may be used either for bright colouring, as some of the newer Maples, or for their unique foliage alike in summer and autumn, as the *Maiden-hair Tree* already noted and the huge-leaved *Magnolia* (*M. macrophylla*). Many large shrubs are often very bright, *Forsythias*, *Weigelas*, some of the *Spireas*, and of course *deciduous Azaleas*. Soil and situation, as mentioned in the editorial note, have in almost every individual case, whether it be species or variety, a lot to do with the autumn colouring and the season quite as much. Some few trees will successfully resist frosts of 10° or 12°, but with the majority this is enough to produce a premature fall of the leaf when it has only commenced to assume its autumn garb. A certain amount of advice is doubtless always acceptable in planting operations, but in a case of this kind it is only, I think, a secondary matter to a careful study by the planter of soil, situation, and the probability of early or late autumn frost. In notes on tree-life in a recent number, for *Elder*, please read *Alder*, and for height of *Abies brachyphylla*, 34 feet instead of 24 feet.—E. BURRELL, *Claremont*.

## GARDEN FLORA.

### PLATE 1148.

#### SINGLE ROSES.

(WITH A COLOURED PLATE OF—1, ROSA MACRANTHA; 2, ROSE PAUL'S SCARLET. \*)

SINCE the National Rose Society introduced competitive classes for these they have rapidly gained in public favour. Many really good old varieties have been brought to the front once more, and not a few of them saved from extinction. In addition to this, we have recently had several grand introductions, most of which might have been thrown away a few years back had not the beauties of these single Roses been recognised by a few rosarians, and their grand effect shown by the stands which invariably attract great attention at the National Rose Society's exhibitions.

When the rage for large and double forms set in, a single or even semi-double Rose, that would now be popular and worth cultivating by

\* Drawn for *THE GARDEN* by H. G. Moon in Messrs. Paul's nursery at Cheshunt. Lithographed and printed by J. L. Goffart.





trade growers, was so useless, that I have no doubt a vast number of beautiful seedlings were cast on one side. Happily, we are not likely to find this the case for some time to come, and there is little fear that our grand singles will again go out of popular favour. We have many grand single forms with not only greater vigour and hardness, but the sweet-scented foliage of our native Sweet Brier. A few of the best singles include the following:—

**ROSA MACRANTHA**, a form of *Rosa gallica*, is a very vigorous grower, with large and boldly-carried golden yellow stamens, and one of the finest climbers.

**PAUL'S SINGLE CRIMSON**, also figured, is a grand fellow climber to *macrantha*. The yellow stamens of this grand Rose are considerably more prominent than shown in the plate, the drawing of the flower being made in a way that does not exhibit them so fully as in the case of *R. macrantha*.

**PAUL'S CARMINE PILLAR**, another grand single from Cheshunt, was figured in *THE GARDEN* of October 27, 1894. It has been exceptionally good this season: in fact, since its introduction I have never found it fail. The flowers are each from 3 in. to 4 in. across and of the brightest and clearest rosy carmine. It is a grand pillar Rose, and difficult to beat when planted singly or in small groups upon the lawn. Shoots from 10 feet to 12 feet in height are produced each season, and covered with large trusses from every eye. These open in succession, and give a much longer display than is usually the case with singles. To many the somewhat fleeting character of the single forms is a great disappointment, but with this variety, also the hybrid Sweet Briers and others producing large trusses of buds, freshly-opened flowers rapidly follow those that are shattered. There is also the great advantage derived from renewed beauty after a heavy storm which would completely ruin the more double Roses; whereas such singles as *Carmine Pillar* open more of their buds as soon as the disturbance has passed, and again afford a charming display.

**PAUL'S SINGLE WHITE** is a most valuable climber, as it not only flowers during summer, but gives a grand display during autumn, a time when our singles are too often bare. I have no doubt we shall ere long have an almost equally good autumnal as spring or early summer display from varieties obtained by careful hybridisation.

**ROYAL SCARLET** (also emanating from Cheshunt) was successful in gaining a card of commendation as a new single at the National Rose Society's Crystal Palace show this year. It is an intensely deep scarlet Hybrid Perpetual, and being a H.P. cannot be exhibited among the so-called garden Roses, although very few would be able to distinguish the difference as regards class. *Royal Scarlet* will certainly become one of our most popular single Roses. It is a very compact and dwarf grower, bearing immense trusses greatly improved by handsome foliage.

**POLYANTHA GRANDIFLORA** (*R. multiflora grandiflora*) is a most rampant climber, producing large, pure white blossoms each 3 inches across. It is one of the best for arbours, arches, and the formation of Rose hedges or screens. The flowers are produced in clusters. In

**POLYANTHA SIMPLEX** we have a miniature form of the above, the trusses of which are of pyramidal form, the whole plant being one mass of star-like blossoms. When planted in masses or allowed to ramble among the stems of an old Thorn hedge, this and a few more varieties are very effective. Indeed, I know of few easier, quicker, or cheaper ways of securing a charming and natural hedge of Roses than a judicious mixture of our strong-growing singles, and such others as *Alice Grey*, *Aimée Vibert*, *W. A. Richardson*, with the majority of the Ayrshire, Boursault, and *sempervirens* sections.

**ROSA LUCIDA** affords us a bright red, and one which contrasts well with the many whites and pale pinks found among singles. The foliage of this variety is also showy and handsome, being a

glaucescent red, so that the whole of the plant heightens the effect of lighter colours. There is a variety called *R. lucida Vivid*, the leaves of which are of a very high colour during autumn. Both are vigorous climbers.

**R. MOSCHATA NIVEA**, or *ALBA*, our Musk Rose, is a grand climber with large trusses of small yellowish white flowers. The inflorescence of this variety is peculiarly pubescent. It can be recognised by that feature and its musky odour alone.

**R. BRUNONIS MOSCHATA** (the Himalayan Brier) is another variety of Musk Rose. This is a pure white, with very prominent golden yellow stamens, produced in immense clusters, and one of the best for arches or any position in which it can ramble.

**R. PISSARDI** produces immense clusters of small, pure white flowers. The growth is vigorous, but the slender, spiny branches droop over quite distinct from those of other Roses. It is very sweet scented, and has the merit of more continuous blooming than other singles. This variety varies between single and semi-double forms.

**BARDOL JOB** is not quite a single, but is so slightly beyond this that I give it a place, more especially so as it is undoubtedly our best large glowing crimson, often heavily shaded with deep maroon. It is very vigorous, the petals of immense size, and we have few more perpetual blooming climbers.

**HEBE'S LIP**, one of the Hybrid Sweet Briers, is another of those varieties so slightly semi-double as to be classed among singles by many growers. It is one of the most distinct and beautiful garden Roses we have. It bears medium-sized blossoms, pure white in the centre, with a distinct edge of purple that is suffused into the petals in the form known as *Picotée* edge.

**R. GIGANTEA**, the giant single Rose from India, must be mentioned. This makes growths of 50 feet: the flowers are pure white and each 5½ inches across. I have not yet heard of its flowering in England, but many plants are being grown here.

**R. LEVIGATA** (syn., *R. nica*) is a very large, pure white flower. The plant is rather tender and needs a south wall. The yellow stamens in this variety are very showy and prominent.

The beautiful Austrian Briers are well known. More distinct singles than the Austrian Copper and Austrian Yellow cannot be found; the former a bright reddish copper with a distinct metallic tinge, and the latter a pure canary yellow. Then we have a large number of Hybrid Sweet Briers that, as already noted, possess the additional charm of sweet-scented foliage. Nor must I omit the manifold charms of the Japanese Briers or *Rugosa* Roses, with their remarkable foliage, always free from mildew and red rust, the first and last to bloom, and eventually forming one of our best autumnal-berried plants. A coloured plate of these will be found in the issue for November 13 of the present volume, and to that, with the accompanying article, I must refer my readers. When noting a few of our best single Roses it would not be right to pass over the beauties of our own species and their great variety.

Uckfield.

A. PIPER.

**Dracæna Lindenii**.—The plants commonly cultivated in gardens as *Dracænas* (some of which are really *Cordylines*) show a great diversity of character, as several widely different forms occur amongst them. Thus we have a group of coloured-leaved kinds, of which *D. terminalis* was one of the earliest forms. Then there is the curiously mottled *D. Goldiana*, the branching *D. Godselliana* with its pretty spotted leaves, the quick-growing *D. Sanderiana*, whose rather short foliage is beautifully variegated with white, and lastly, this under notice, *D. Lindenii*, which is apparently a variety of the old *Dracæna fragrans*, a stout, sturdy-growing species, with broad, gracefully recurring foliage. Instead of the leaves being green, they are, however, in *Lindenii* beautifully

variegated with rich yellow, which covers the major portion of the leaf, being divided into two parts by a greenish stripe down the midrib. This central band is broken up into different shades of green, varying from a deep lime to a pale greyish-green tint. This *Dracæna* needs ample room for the broadly arching leaves to develop, and it also requires a fairly light position, as if too much shaded it is less brightly coloured.

—H. P.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

SELDOM, if ever, can a more favourable autumn be remembered, as, apart from there being an absence of frost, the ground has been in splendid condition for digging, and it has also given late-planted crops an opportunity to make not only free, but firm growth, which should be in a better condition to resist frost than when this follows an abundance of rain. I advised a few weeks ago pushing forward both digging and trenching, and where this was done, especially on retentive soils, much of the laborious work which so often proves trying in the spring will be well advanced and the soil will also be all the better for a long exposure when the time comes round for sowing and planting. Now is the time to select sites for the different main crops and have the ground treated accordingly. Peas being perhaps the main summer crop, a good open position should be selected, as they are never so satisfactory when grown in close proximity to fruit and other trees. It has been frequently pointed out that when these can be planted in single rows or grown wide apart the crop is not only heavier, but the haulm continues in a full bearing condition much longer. In arranging for such sowings trenches could be prepared now similar to those for Celery. These could be marked off in different parts of the garden, or if necessary to have several on one quarter, remove them from each other as far as possible, and the space between them will answer well for any other crops of dwarf habit. Time can be found now to do such work; whereas, if left till spring, ordinary digging would probably have to suffice, owing to so many other things requiring attention. If the soil can be broken up a couple of spits deep, burying plenty of decayed manure in the bottom, healthy growth and heavy crops will be forthcoming. Should we experience a dry time, such as proved so disastrous to the Peas the last two summers, strips of ground a yard wide, and treated as advised above, will form a capital seed-bed for all the strong-growing varieties, such as *Ne Plus Ultra* and others. A shallow trench should be made to receive the early batch when planted out from pots. The first favourable day can then be taken when they are sufficiently advanced to plant them, and being naturally tender the sides of the trench will act as a screen against trying winds, while should it be necessary they are easily protected if a few degrees of frost threaten. Another advantage gained by planting this crop in trenches is being able to afford copious watering during dry weather, and also mulching. For some reason Jerusalem Artichokes are generally allotted the worst position in the garden, but treated more generously, both as regards site and preparing the ground properly, finer shaped tubers and much heavier crops are obtained. A single row planted last spring in a favourable part of the garden has yielded an enormous crop of handsome-shaped tubers, as many as a peck being taken from one root, and all fit to be sent to table. This points to the penny-wise-and-pound-foolish method of neglecting this crop, which, if grown under favourable conditions, would prove one of the most profitable in the garden.

**GLOBE ARTICHOKE**.—These will soon need attention in the way of protection before they are injured by severe frost. As yet the foliage is as strong and healthy as in summer, but as this dies

down it will be wise to spread some light dry litter around the crowns. This is better than applying a great thickness of decayed manure, which may cause the crowns to rot should there be a quantity of rain. It would be well also to be on the alert and have suitable material at hand for other things which may require it, such as Rhubarb, Seakale, and even Celery, while salads, Cauliflower, and the like, growing in unheated pits and frames, will be kept safe by having double mats to place over them when frost does come.

**SEAKALE** that has been grown for lifting to be forced early should be got out of the ground at once, or at least a good portion of the crowns, so that no delay arises during hard weather. Failing this, a breadth should be covered with litter or bracken to allow the roots to be forked out at any time. Celery, if properly banked up now so as to throw off rains, will require very little protection, as when the foliage is much exposed rain collects and drains to the centre of the plants, which are then easily injured should frost follow. A final moulding up should be given at once, as no further leaf growth is needed.

**GREEN VEGETABLES.**—Although these are plentiful now, some regard should be paid to varieties, and the less hardy ones used up first. Most of the early Savoys are well forward; many of them, owing to the open weather, are ready to burst. No one, then, should think of leaving these and commence cutting the hardier Kales. The latter should be preserved as long as possible, as after a severe winter these may be found the only green vegetable left in a serviceable condition, and prove most valuable through March. Spinach is very plentiful just now, but where the foliage has become so large that it overlaps that in the next row, its removal at once would be an advantage, as such a bulk of leaves is more apt to suffer after snow than is the case where the plants have more room to become dry, and sun and air can act on the ground between them. Look over the Broccoli breadths frequently, and lift any that are ready for use, but which may not be required just at the time. Their removal to a sheltered place will not only preserve them from frost, but a continuous supply is in a great measure ensured.

R. PARKER.

#### HARDY FRUIT GARDEN.

NEVER in the whole of my experience do I remember a more propitious season for planting than the present one. The soil being in a medium state of moisture is in the best possible condition for planting, as it crumbles down well and does not stick to the feet of the planters. I had an instance of this when superintending the planting of an orchard last week. The soil is a very heavy loam overlying the old red sandstone, and almost unworkable in a wet time. I was agreeably surprised to find it in such excellent working order, and the planting having been performed under such favourable conditions, I am very sanguine as to future results. As this will be a grass orchard, the trees are being protected with guards made of strips of 2-inch wire mesh netting 30 inches wide, No. 16 gauge, with a single strand of barbed wire run round each guard.

**PEARS.**—These trees have ripened their wood thoroughly and are in a most promising condition. Established trees should have all young wood pruned in to three buds, but any young growths which spring direct from the main branch should be left a trifle longer. These will eventually make fruiting spurs, and will in time enable some of the oldest of the original spurs to be cut out. Older trees having very long spurs should be spur-pruned, as recommended for Plums. Pears lend themselves more readily to this kind of treatment than any other fruit tree, and by its means old trees can be effectually furnished afresh with a complete set of new spurs. In the case of fan-trained trees the main branches should be kept evenly disposed at regular distances, and the intermediate ones kept

thin, or about 6 inches apart, so that crowding does not occur. Thin and regulate the wood in young trees, spurring back all not required for extension, and either tip or shorten back the leading growths at the ends of the future main branches, according to the amount of growth they have made and the space at command. Young horizontally trained trees should have two young shoots left for forming a new tier of branches. These tiers of branches should be trained out at right angles to the stem, and stand 1 foot apart from one another. The leader in this case should be left about 15 inches long. This will allow for the topmost shoot being taken up to form the new leader next spring, when the two below it will furnish growths for forming the next tier of branches. Cordons require but little pruning if they receive attention at the hands of the grower in the summer and early autumn. A general look over suffices now, when any piece of young wood missed or which was not shortened back sufficiently, can be attended to. Those varieties which are prone to make a superabundance of fruit buds should have the same partially thinned out. A little timely attention in this way, also in keeping the roots in working order, prevents such trees from getting into a debilitated state. These remarks also apply to trees other than those grown as cordons. Cut back the leaders on young cordons to firm wood, and select a good prominent wood bud. It is necessary to draw the attention of young beginners to this matter, as these leaders oftentimes make more fruit-buds than wood-buds. Regarding training, it is not necessary to enter fully into it here. Pay attention to the manner in which the nails and shreds are used, and allow ample room for the branch round which they are placed to swell properly. The same remark applies to tying, and in this case place a shred between the string and bark should there be any strain upon it. Tanned twine is very durable for this purpose, particularly for securing cordons. With regard to insect pests and the remedies to apply for their extermination I must refer the reader to the first page of THE GARDEN for November 20.

**APRICOTS.**—The fine autumn, coupled with the fact of the trees in many cases having had a partial rest during the past season, has had a most beneficial effect on them. The young wood and spurs are well clothed with blossom buds, which are firm and as brown as a nut. Some growers disbud their trees and grow them in a similar manner to Peach trees, while others rely on spurs to furnish the crop. I favour a system which is a combination of both, and find it answer remarkably well, the invariable result being heavy crops of fruit. Pruning in the case of Apricots consists in shortening back all spur growths, thinning out the young wood where too much has been laid in, and cutting away any dead snags or spurs. If a piece of young wood has to be shortened back for any purpose, see that the cut is made at a wood bud, or the branch will die back. Cut out dead branches in a careful manner, injuring the live bark as little as possible. Young trees should need no pruning beyond a regulation of the young wood, as all other matters should have had attention during the growing season. Neglected trees, whether old or young, must not be too severely dealt with in one season, otherwise gumming will be the result. At the same time, and in the latter case the young wood must be shortened back to restore the proper balance, and attention paid to the trees during the next season in the stopping of all gross shoots to ensure a more even growth. Regarding older trees, spurs on these may have been allowed to grow out a long way from the face of the wall. A judicious spur pruning will be of great value here, but it must not be overdone, or the object in view will be defeated. When training out Apricot trees afresh, pay great attention to the following matter. Unless absolutely necessary, never remove a full-grown branch from its original position. Apricot wood is of such a brittle nature that if such branches are bent round and moved about too much the sap vessels become ruptured

and the branch ultimately dies. Use narrow shreds for fastening young wood to the wall, and see that the nails are so driven in that they do not come into contact with the branches. Older branches may be secured in the same way as recommended for Pears. Brown scale being partial to Apricot trees, wash and spray the trees as soon as training is completed. If not already done remove the summer mulch from the alleys when raking up the prunings, after which top-dress the border if in need of it. Use good loam if it can be spared, and to ensure porosity mix plenty of lime rubble or old plaster with it. If the trees are in need of a stimulant add a fair amount of bone meal, but eschew the use of rotten manure. In some localities there is still a scarcity of water, owing to the meagre rainfall. It is in such instances as these that there is a danger of Apricot trees getting dry at the roots; a condition most trying to them. They should, therefore, be examined, and if found to be at all approaching a dry condition, well water at once.

A. W.

## STOVE AND GREENHOUSE.

### THE CULTURE OF HYDRANGEA HORTENSIA.

SOME amateurs, who were struck with the great difference between the growth of my Hortensias which they saw in the exhibition at the Tuileries and that of the plants which are usually seen in the markets, have asked me how I obtained such good results. To all of these I have much pleasure in replying, through the medium of the *Revue Horticole*, in the following notes:—

**PREPARATION.**—First of all, cuttings of Hortensias may be put in either in spring or in summer, but, for good culture, it is essential that this should be done in the month of May, when the cuttings should be struck under bell-glasses and on a spent hot-bed. When they have taken root well, they may either be potted or pricked out in the open ground, the latter being by far the better course to adopt, as it is the chief condition of success. In the climate of Paris, Hortensias require to be grown in sandy heath-soil, while, at Versailles, in certain well-drained sandy clays these plants do well when the soil is mixed with a proportion of leaf-mould. In all these cases lime should be rigorously excluded, and therefore care should be taken that in watering the plants no well-water should be used except such as has been proved to contain no such injurious ingredient. Most of the wells around Paris are strongly impregnated with carbonate of lime, but some growers may have the good chance of getting water from a well sunk in a stratum of clay. In such a case the water is more likely to be impregnated with sulphate of alumina and with sulphate or oxide of iron, and these are precisely elements that are favourable to the culture of Hortensias. After the young plants are pricked out in the open ground in heath-soil they are watered lightly twice a day. About the end of August the shoots are pinched and when winter approaches the plants are taken up, potted, and placed in a cool house or under a frame, where it is important that they should receive as much air and light as possible. After this first wintering, the plants are taken out of their pots and again placed in the open ground, as in the year preceding. At the same time they are pruned severely, the stem being cut back to the best two eyes at the base, from which fresh wood will start that, later on, will produce seven, eight, or even ten ramifications. Of these not more than five or six of the best formed should be retained, if fine large flowers are desired. The rest should be pinched back to three or four leaves at the most. While the plants are growing, it is important not to allow the branches to become immoderately long, and for this purpose it will be sufficient to diminish the amount of water about the month of July. This precaution, moreover, is indispensable, in

order that the plants may form flower-buds better, as the flowering, being strongly induced by the temporary check to the growth of the plant, attains its maximum of preparation by the production of a very great number of flower-buds.

About the end of August or early in September the plants are again placed into pots six or seven inches in diameter, according to their strength. Care must be taken in doing so not to break off any of the leaves, and the plants should then be placed in shade, so that the sun may not act on them injuriously during the period of striking root, which lasts for a fortnight. They are to be watered lightly twice a day and well watered whenever there is occasion for doing so. When they have thoroughly taken root again heavy watering is discontinued to allow the wood to ripen and the leaves to fall off. The plants are wintered under frames or, preferably, in a cool house. It is still more necessary now than in the preceding year to give them as much air as possible, as without this precaution the flower-buds would soon damp off. Diffused light also is necessary, but I cannot too strongly impress the warning that the light by itself is not sufficient, and that there must be added to it the greatest possible amount of air. The plants are thus in their period of rest during the first part of the winter; they come naturally into growth in spring, and if the flowers are wanted only at the normal flowering season, all that is necessary is simply to assist the growth, so far as this can be done, by keeping up such a temperature as will exclude frost. In this case a constant heat of from 45° to 50° Fahr. will be sufficient to maintain the growth of the plants and to ensure their flowering at the time desired.

**FORCING.**—Should the object, however, be to obtain Hortensia blooms at an earlier date, the period of rest must be abruptly terminated by the operation of forcing. From two months and a half to three months must be calculated for between the time the plants commence to grow and the time when the flowers make their appearance. Suppose, for instance, that you require the flowers for March 19, you must start the plants into growth about January 10 by raising the temperature of the house to from 60° to 70° Fahr. This rise in the temperature need not prevent the free admission of air whenever the weather outside will allow of it. On the contrary, Hortensias, like all other plants which must be grown under glass, can only be maintained in a healthy condition under a good system of ventilation.

**COLOUR IN THE FLOWERS.**—All is not done in striving to produce Hortensia blooms of a blue tint unless the colour obtained is brilliant and uniform. Nothing, in fact, is uglier than a panicle of the flowers only coloured blue in one part, pink in another, and green in the centre, with vague intermediate shades all simply combining to produce a dull, wan shade of colouring. The flowers also should be large and, as far as possible, all expand at the same time. Good results in all these matters may be obtained at the same time by the following means: (1) At the time of the second repotting, just before the winter of the second year, wash the roots and rootlets thoroughly, so that not a single portion of the soil in which the plants passed the summer may be left adhering to them. Repot the plants at once in a proper ferruginous compost, having for its base sandy heath-soil, with which are incorporated 10 per cent. of iron slag, pounded fine, 1 per cent. of sulphate of iron, and 5 per cent. of dried night-soil. Instead of this may be employed 10 per cent. of pounded slate, 1 per cent. of sulphate of iron and 1 per cent. of ammonia. The plants are to be well watered twice a week with water in which sulphate of iron has been dissolved, in the proportion of from 10 grains to 16 grains (Troy) to the quart. [Some growers, in order to obtain certain results, employ exclusively soil taken from ground in which slate quarries are found, which is rich in sulphate of alumina. The effect, moreover, which is produced by pounded slate is entirely owing to the

presence in this slate of from 25 per cent. to 35 per cent. of alumina, and of from 6 per cent. to 12 per cent. of sulphide and oxide of iron. The slate also contains potash to the extent of about 4 per cent. It is also owing to the combined presence of the sulphate and oxide of iron with alum (bi-sulphate of alumina and potash) that some argillaceous soils naturally produce the blue colour in Hortensia blooms. We know, besides, that the alum of commerce is extracted from plastic and potters' clay by leaching those clays after they have been dried and reduced to powder. A fine blue colour is also imparted to Hortensia flowers by placing in the bottom of the pot, when potting the plants, a small quantity of crushed alum. In this case, however, it is necessary to be sure that the potting soil itself does not already contain a sufficient proportion of alum. Even if it does, that does not diminish the necessity of watering with a solution of sulphate of iron and dried night-soil, H. D.] (2) Admit air as much as possible in proportion to the light. The darker the day, the less air should be given. On the other hand, the brighter the sunshine, the greater the amount of air that should be admitted, if frost should not prevent the opening of the frames while the sun is shining.

**SPECIMENS IN SMALL POTS.**—People fall into raptures when admiring huge flowers of Chrysanthemums, or of Hydrangea Hortensia, H. Otaksa or other kinds, growing on a short, unbranched stem rising from a small pot. Nothing is more easily obtained. Take the pinched-off shoots which were removed from crowded branches, choosing those which have the thickest wood, as these certainly have a flower-bud; make cuttings of them, and when they have taken root prick them out into small pots. Place these pots on a warm hot-bed and under a bell-glass, so as to have the air excluded. The cuttings will have struck root in about eight days' time, and soon afterwards you will have a grand display of flowers. In this case, should you desire blue flowers, the cuttings should be pricked out in ferruginous soil, and they should have been taken from parent plants which were also grown in the same kind of soil.

Lastly, those who devote themselves to this special culture should possess very vigorous-growing parent plants with very thick wood, and which have been brought into this condition by a plentiful application of manure.—GEORGE BOUTCHER, in *Revue Horticole*.

**Croton Van Cœrstedt.**—This is a very freely-branched, small-growing Croton, quite distinct, and very useful when grown in small pots for the edges of groups and positions where dwarf-growing kinds only would be suitable. It cannot lay claim to any particular grace or elegance, as the leaves though narrow are short and stiff, their colour being a rich deep green thickly sprinkled with tiny spots of yellow. It is also occasionally met with under the name of aureo-punctatus. This Croton branches so freely as to form even when young quite a dense bush. Neat and effective little plants may be grown in pots only 4 inches in diameter.—H. P.

**Abutilon Boule de Neige.**—A great number of hybrid varieties of Abutilon have been raised and distributed within the last few years, among them being several with white blossoms. None of them, however, has proved equal to the old Boule de Neige. Apart from its own individual merit Boule de Neige has proved most valuable to the hybridist, as the now popular race of garden Abutilons owe their origin to the intercrossing of this and the old bronzy-red Abutilon Darwini. It is somewhat singular that the union of these two should result in varieties with pink blossoms and other allied shades in which the red of Darwini is completely eliminated. An exactly similar result, however, is to be found in the Javanese Rhododendrons now so popular, for the crossing of the orange R. javanicum with the white R. jasminiflorum produced the pink R. Princess Royal. Abutilon Boule de Neige may

be grown in various ways, as it does well clothing the wall of a greenhouse, the handsome deep green foliage serving to show off the pure satiny-white blossoms to the best advantage. Again, trained to a roof or pillar it is very effective, while in bush form it will flower with equal freedom. Good-sized plants may be sometimes seen put out in the London parks during the summer months, and so treated they flower well.—T.

**Pinguicula caudata.**—When visiting a short time since the Queen's Road Nursery of Mr. James Cypher at Cheltenham, my attention was attracted by a large batch of this. The plants, of which there were many, were growing in small pots. They had quite dense rosettes of leaves close down on the surface, and from the centres of the plants rose long scapes, each one crowned with a bright deep rosy carmine-coloured corolla. On young plants the leaves are arranged in the form of dense rosettes, fleshy, long, narrow, the tips slightly incurving, but when the plants age the leaves change considerably in character; they then become few, large, and take on a dull yellowish green colour with stained margins. This does well in a cool Orchid house where there is a command of a plentiful moist atmosphere, and at this season of the year a temperature of 45° to 50° by night. The plants at Cheltenham were in what is known as 3½-inch pots; they are potted lightly in a compost of peat, sand and Sphagnum Moss in about equal parts. The plants bloom in autumn and up to Christmas. They are then rested for a time, during which they require but little water. When they begin to make growth in the spring more water is required, and then increase can be made by division. In addition to this method of propagation, plants can be increased by means of the leaves, as in the case of Gloxinias; they will strike freely in the compost recommended for potting.—R. D.

#### BOUVARDIA HUMBOLDTI CORYMBIFLORA.

IN THE GARDEN (p. 443) reference is made to the specific name of the above, and it is stated that corymbiflora should take precedence. At one time I was under the impression that it should be so, but have since found that I was wrong, corymbiflora being an improved variety of the original species (B. Humboldtii). I do not remember to have seen the old form. I met Mr. P. Henderson, of Maida Vale, a few years ago, and he informed me that the firm raised (or introduced) corymbiflora, which was a great improvement on the species, which never produced its flowers in such large corymbs or trusses. To be quite correct, I imagine that the name should be written B. Humboldtii var. corymbiflora, yet as there appears to be only the improved variety in cultivation, it is hardly necessary to use both names. In the trade it is generally spoken of as Humboldtii only. At a recent meeting of the Royal Horticultural Society a further improved variety was exhibited and gained an award of merit under the name of Humboldtii grandiflora. This has a stouter tube and broader lobes; the leaves are also broader than in corymbiflora. I was at first inclined to think that culture had made the difference, but on comparing the two I found a decided difference, particularly in the foliage, and it should undoubtedly supersede the older variety. As to culture, I find Humboldtii requires different treatment from that given the varieties of other species. It requires more root-room; cuttings struck early in the year will flower the following autumn; the plants should be grown where they are fully exposed to the sun, and should not be stopped so late in the season as the other sorts. When grown for cut bloom, old cut-back plants are preferable. I have seen it flowering freely when planted out of doors, but to have nice clean blooms it is necessary to protect from rough weather. I believe many growers fail to flower this Bouvardia through not treating it liberally enough. With plenty of pot room and a liberal supply of manure, the same plants will

keep up a supply of bloom for a considerable time. In the country it might flower up to Christmas, but in the neighbourhood of London I have never been able to do much good with it after November comes in. A.

## ROSE GARDEN.

### ROSE COMTESSE DE NADAILLAC.

A GREAT number select this Rose from flowers that are staged for exhibition, and consequently Comtesse de Nadaillac is well known, has many admirers, and yet disappointment is almost an inevitable consequence of any first attempt at its culture. Who can fail to admire those wonderful boxes of blooms of this Rose so varied in colour that Mr. Prince shows from his nursery in Oxfordshire? Soil and situation must be considered in the production of such flowers, and a breadth of this kind in a nursery such as we have seen with Mr. Prince is something to remember. After many trials, however, it must be admitted that this lovely Rose is fickle, and if we were asked for a selection of twelve or twenty-five of the best garden kinds, even then we should leave this one out. Still, it will continue to draw admirers, and those who like to give it a little extra care will find themselves abundantly repaid when its many-tinted flowers appear. It must have a warm and sunny spot and open-air culture to get its full beauty. At the foot of a wall it is sometimes very happy, and in the Colchester nurseries we have seen grand flowers produced by plants so situated. It is only a moderate grower at the best, and cannot be effectively grouped in the garden, unless soil and situation are specially favourable to it. It was raised by M. Guillot, and sent out in 1872.

**Rose Rainbow.**—This has been very lovely this autumn, a season of the year that one sees its parent Papa Gontier in greatest perfection. Rainbow has all the characteristics of Papa Gontier, only that it is striped and flaked with the rosy-crimson colour of the latter on a pale peach-coloured ground. I consider it a very valuable addition to the Tea-scented class.—E.

**Rose Queen of Bedders (Bourbon).**—Even now the plants of this variety are covered with large red buds that would produce a fine show were they not hindered from expanding by the damp and foggy December days. These hard-opening Roses are not so suitable as the Teas for late autumnal displays, but in the waning summer, when many of the Hybrid Perpetuals have yielded their first crop, they come in very useful. The colour of Queen of Bedders is deep crimson, the flowers are rather flat, and the growth is very similar to that of Souvenir de la Malmaison.—E.

**Rose Perle des Rouges (Polyantha).**—This latest novelty among these exquisite miniature Roses is a very acceptable acquisition. The colour is velvety crimson, and although not quite up to our ideal of a scarlet-crimson variety, it is, nevertheless, a great gain. Hitherto the deepest colour in this section has been the variety Blanche Rebatel, but the purplish shading has hindered it from obtaining much popularity. I believe Perle des Rouges will be extensively employed by gardeners for massing, and it will probably rank with Gloire des Polyantha for effectiveness.—E.

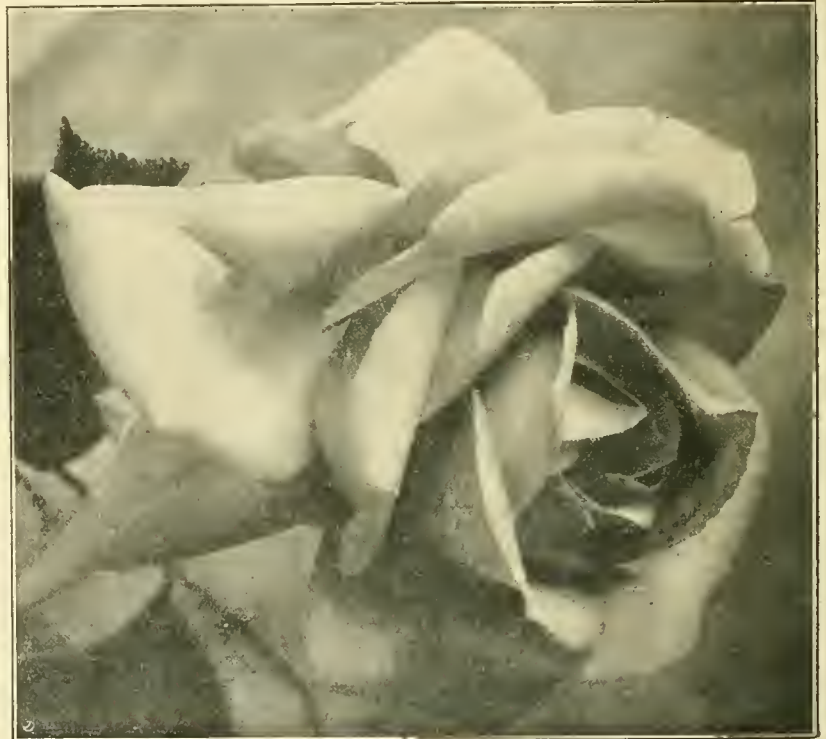
**Colour in Mme. Faleot Rose.**—It is pleasant to read of such splendid specimens of this fine old Rose as related by "J. R." in THE GARDEN lately. I think the secret of the intense colouring that he refers to is mainly attributable to old age, and consequently a very abundant supply of roots which such twenty-year-old plants would possess. Then again, the covering of glass and abundance of air would ensure a thorough ripening of the

wood, an essential factor in the production of fine flowers. "J. R." says the border was entirely re-made two years ago. As this operation must have been very carefully performed, judging by results, I should have been surprised indeed had he not obtained these richly-coloured flowers from such rejuvenated and doubtless highly-fed plants.—PHILOMEL.

**Potting Roses.**—Now is a very good time to pot up a few standard, half-standard, and bush Roses to provide a supply for filling up gaps in the late spring. It is not always convenient to plant at the proper time, and somehow the work is delayed until too late; consequently a season is lost; but if a few plants are held in reserve in pots the result will be the same as if the plants had been put out in autumn, provided they are carefully turned out of their pots and the ball of earth left intact. Some well-flowered standard and half-standard Roses in pots are also found to be very useful upon special occasions. As the standard Brier has a peculiar root, ample pot room should be afforded. A 10-inch or 12-inch pot will be found none too large. The pots should be plunged in some ashes or cocoa-nut

I would recommend gardeners to meet the demand by potting up a quantity for this purpose. Grow them on under cool conditions the first year until well established, then they can be forced to meet any requirements. After flowering, cut away some of the old flowering shoots and grow on in heat with plenty of moisture during the summer. This treatment will quickly bring forth young growths that will flower from every eye. Those plants intended for pillars may have their shoots bent down for a time to ensure a thorough breaking of all the buds, afterwards training them in pyramidal form.—PHILOMEL.

**Rose Alfred K. Williams.**—Not only is this one of the best of the autumn Roses, but it is also a superb variety for summer flowering. It is true the constitution of the plant is not altogether what one would desire, but we can afford to overlook this failing in an otherwise grand variety. Some really wonderful flowers are produced from one-year-old plants on the Manetti, and for exhibitors this may seem a sufficient excuse for growing this Rose on that stock, but as a permanent plant I would most decidedly recommend obtaining this beautiful variety on the seedling or cutting



Rose Comtesse de Nadaillac. From a photograph by Messrs. Byrne and Co. Richmond.

fibre refuse quite up to the rim, and if frosts are severe, a covering of straw or leaves will be beneficial.—W. E.

**Standard and pillar Roses in pots.**—Frequenters of exhibitions must have noticed the growing tendency of exhibitors for more natural training, and in no instance is this more observable than in the national flower. The giant specimen Roses exhibited in the palmy days of South Kensington were objects of wonderment, but no one could truly say he admired them. On the other hand, let anyone place before the public a fine standard of some of the best coloured Teas, the branches pendent with the weight of the lovely blossoms, or a superb example in pillar form of such chaste and elegant Roses as Claire Jacquier, Crimson Rambler, Alistair Stella Gray, Adelina, Vivian Morel, Aglaia, Longworth Rambler, with many others, and he will quickly discern the trending of popular taste. No plant can be more suitable for conservatory decoration than a well-flowered pillar or standard Rose, and

Brier, the former for preference. The great fault of the Manetti from a gardener's standpoint is the early maturation of its growths, and consequently little or no autumnal display, but on the Brier, especially plants on the seedling, this Rose is oftentimes seen at its best in autumn.—E.

**Climbing H.P. Roses.**—The climbing or extra vigorous forms of this fine hardy class possess considerable value to denizens of large towns or bleak and cold situations. It is true they have not the rambling nature of the Tea and Noisette, Sempervirens and similar classes, but they are hardier. Where possible they should be obtained on own roots, as, indeed, should all Roses that are destined for such permanent positions as climbers on walls or pillars. Mention should be made of Climbing Victor Verdier, for although scentless it is a useful Rose, with prettily formed rose-coloured buds. Climbing Jules Margottin is certainly the most rampant of them all, and very serviceable it is, although its fragrant flowers never appear so fine as on the dwarf

variety. Then again we have that beautiful old Rose Princess Louise Victoria, with its charming flesh-coloured flowers that almost rival those of Captain Christy in loveliness. Bessie Johnson in climbing form is yet another worthy variety, if only for the delicious fragrance of its bluish-coloured blossoms, and Climbing Mlle. Eugénie Verdier is not quite so vigorous as the above varieties, but it will make growth in one year 4 feet to 5 feet long, and a well-established plant of it covered with its delightful flesh-pink flowers on a low wall or grown on a pillar produces a very fine effect. Yet another excellent salmon-coloured variety is Climbing Pride of Waltham. Not only do these climbing Hybrid Perpetuals provide us with good hardy ramblers, but they, together with some of their allies in the Hybrid Teas, such as Climbing La France, Climbing Captain Christy and Pink Rover, give us some of the very best climbing pink Roses, a colour of which the pure Teas of climbing habit are very deficient. Undoubtedly if it can be fixed, the Climbing La France will become a grand acquisition. I recently saw some plants that had made 6 feet to 7 feet shoots the first season from the bud, but a large proportion in the row had reverted to the dwarf type. The varieties I have named, together with such a fine scarlet as Gloire de Margottin and, for white, Paul's Single, will give a selection of excellent climbers. —PHILOMEL.

## ORCHARD AND FRUIT GARDEN.

### MARKET GRAPES.

I FANCY that more difficulty will be experienced in keeping Alicante and Muscat of Alexandria than has been the case for some years. The former in many places was fully coloured and quite sweet by the middle of September. In an ordinary year this would not much matter, but all through October and in the early part of November; day and night temperatures have ranged unusually high, and although Grapes to keep should be thoroughly ripe, they should be kept as cool as possible after they are ripe. Shrivelling and decay of berry are more apt to be troublesome when the berries have been exposed to a month or more of summer heat after ripening than when the weather has been in the cool side through the autumn months. The dense fogs which prevailed necessitated the application of artificial heat, for without this a large number of berries must have decayed. The best trying month for late Grapes in a general way is November; the Vines being clothed with foliage, the circulation of air is impeded, and a large amount of evaporation is going on. As soon as the leaves fall, the amount of moisture to be got rid of is much less, and it is easier to perceive decaying berries. Later on there is apt to be a difficulty in another way. In a time of hard frost, especially when the days are bright, evaporation from the berries is too rapid and the bunches lose in weight and appearance. One of our largest Muscat growers covers his houses with thick netting after the turn of the year. This serves a twofold purpose, lessening the need for fire-heat, thereby economising fuel, and in some measure screens the berries from the action of bright sunshine. When the pipes have to be made very hot, the bunches near them are apt to shrivel, and the dried atmosphere which they create seems to destroy the bloom and perfect finish of the fruit. There is undoubtedly nothing like bottling, where this can be done, and I wonder that this way of keeping Grapes has not been practised to a greater extent by those who grow this fruit on a large scale for profit. The initial expense would, it is true, be considerable, but there should be good interest on money expended in this way.

The amount of fuel and the labour required to keep say 5000 bunches from December onwards are very great, and these would in a great measure be saved. Not only is this the case, but the Vines are relieved of their burden at an early date, and the work of pruning, cleansing, manuring, &c., can be done at a time when most convenient. It is also, I believe, a fact that Muscats and Gros Colman keep longer in better condition when bottled than on the Vines, which has a direct bearing on that all-important item, marketable value. After the middle of March there is generally a considerable rise in price. Muscats which in February have been selling at from 3s. 6d. to 5s. per lb. will frequently suddenly run up to 10s. per lb. by April. Last spring upwards of 10s. per lb. was obtained in Covent Garden for Muscats, but these came from a Grape room. I doubt if any so good were forthcoming direct from the Vines at that late period. If a man could obtain from 6d. to 1s. 6d. per lb. more by bottling he would get a good return for his outlay, and be saved a lot of troublesome details which are indispensable when the fruit hangs so long on the Vines. Gros Colman is admittedly the best variety for long-keeping when it can be brought into a highly-finished condition. Perfectly developed it will keep longer than any other Grape, but herein lies the difficulty which comparatively few manage to conquer. Those who may be thinking of taking up the profitable culture of this variety cannot be too fully impressed with this fact. Partly coloured, Colman is not so valuable as the more easily grown Alicante in its best form, and all advantages to be derived from its superior keeping qualities are lost, for imperfectly matured fruit will not remain in good condition for any length of time. Gros Colman even under the best management is apt to be disappointing; whereas the Alicante with fair treatment seldom refuses to yield good crops of finely-coloured fruit. A house of Alicante containing thousands of bunches in perfect bloom and colour is worth going a long way to see, and, taking one year with another, I doubt if any Grape is more profitable. J. C. B.

**Pear Nouvelle Fulvie.**—This Pear is not grown so much as it deserves, as it is really an excellent variety and not at all fastidious as to soil. Its season is given as from December to January, but I find it is ripe in November and early December. It is only fair to add the fruits are from cordon or dwarf bushes and pyramids in a warm soil, this affecting their keeping. It cannot be called a handsome Pear. It is free from coarseness, of excellent quality, and the fruits have a delicious flavour. With me it does best as a pyramid. Doubtless the close stopping needed for cordon training is not favourable to cropping, and in bush or pyramid form it rarely fails to bear; indeed, in some seasons so freely, that thinning is necessary to obtain good-sized fruits. It is not a gross grower, and is therefore well adapted for gardens where space is none too plentiful. —G. WYTHES.

**Apple Cockle Pippin.**—This old variety, which recently secured the award for flavour at the meeting of the Royal Horticultural Society, is well worth space in all collections. I admit it is not a showy Apple by any means, and in collections of fruit two or more months ago it would have passed unnoticed. The variety in question does well in most soils. In a light soil on gravel the tree creeps freely, but the fruit lacks the size of that grown under more favourable conditions. I find it does not keep so well from trees on the Paradise stock. I should be glad to know if other growers have this difficulty. Though its season is from November to the end of the year, when I had trees of this variety in Gloucester-

shire I kept the fruit well into March. The fruits were from standards. I have no idea on what kind of tree or on what stock the dish of this variety referred to was grown, but the fruits were excellent and the flavour superb. Even in standard form this variety does not make a large tree—at least I have never seen very large trees—and on the Paradise it is one of the most shapely and prolific varieties I know. This variety I often noticed did well at Chiswick in the society's gardens, and Mr. Barron had a high opinion of its quality. I believe it is a Sussex fruit, and may be kept a long time, given cool storage. As a market fruit I fear its appearance would not be in its favour.—GROWER.

**The fruit flavour prizes.**—I do not remember to have seen issued so far any statement as to the varieties of Apples and Pears that have been awarded prizes in connection with Messrs. Veitch and Sons' flavour classes for these fruits at the Drill Hall and the Crystal Palace. It seems as if the competitions for the present season will have very little merit after the January meeting, the last one in the Royal Horticultural Society's year, that a favourable opportunity would then present itself for the issue of a tabulated report, giving not only the various dates on which each variety received an award, the number of times in each year totalled, the name of the exhibitor and place of growth, nature of soil and such other information as may be found useful. The competitions have been running two years, and each of the years has seen many repetitions. These would have been more frequent in some cases, notably Cox's Orange Pippin in Apples, but for the limitation put on exhibitors with respect to the number of times they can exhibit the same variety. Probably the number of varieties that have won prizes will be with both Apples and Pears found to be rather few compared with the large number of varieties in commerce. Were the competitions continued for other two years, it is doubtful whether any better flavoured varieties of either fruit would be found. Certainly there have been none put into commerce for some time that equal those already so well known. It may be worth while, should Messrs. Veitch and Sons purpose continuing the competitions, to withdraw from them all varieties that have received awards in their season two years in succession, and thus give room for the introduction of other good varieties that have so far been put into the background by superior rivals. We know now which are the best, but there may be some others yet comparatively undiscovered.—A. D.

### PLANTING FRUIT TREES ON WALLS.

Would you kindly inform me at what distance apart Apples, Plums, and Pears should be planted on walls and as espaliers.—J. McK.

\*\* The distance apart for planting fruit trees depends a great deal on the soil, the position where planted, and the stock on which the trees are worked. Take soil first. If this is what is termed a good loam of a fair depth and not wet or too stiff, trees in such land will grow very quickly. Apples come first. Pyramids or bushes on the Crab stock may be planted 9 feet to 12 feet apart, the latter distance in good land and if the trees are well balanced and healthy. Trees on the Paradise stock need less space. Here 6 feet to 9 feet will suffice, as this stock will not produce large trees. Six feet is often allowed bushes, but it is rather too close when the trees are in well-worked soil. For espaliers horizontally trained, 12 feet to 15 feet apart is a good distance. Cordon Apple trees may be planted on a wall at 2 feet apart if placed as an edging in double form 12 feet to 15 feet apart. This allows of from 6 feet to 7 feet of growth each side the tree, and this is sufficient if the trees are on the Paradise stock. Single cordons will only require half the distance of the double tree, 6 feet to 8 feet being ample, the smaller distance for small growers on the Paradise. Pears, pyramid or bushes on Quince stock, should be 6 feet to 9 feet

apart; if on the Pear and strong growers, 9 feet to 15 feet cordons the same as advised for Apples, and espalier trees 15 feet to 20 feet, the former distance for slow growers or those on the Quince. Plums need more room. For bushes and pyramids, 10 feet to 12 feet is none too much, and trees against walls 15 feet to 20 feet. Plums often grow very quickly, but if kept root-pruned every half dozen years a distance of 15 feet apart is ample. The trees also are more prolific. The Peach and Nectarine need the same treatment. I would advise 15 feet to 20 feet; the latter is none too much if trees are well done and grown freely, that is plenty of young wood laid in. Young trees at the start are often planted at 4 feet apart, in time every other tree being removed. Indeed, with most kinds of fruits this close planting may be adopted if there is no neglect in after years in removing.—Ed.

### JARGONELLE PEAR.

This is one of the most delicious Pears in cultivation, and if flavour alone is to decide the selection, it may well head the list. Unfortunately, the Jargonelle is of the worst habit of growth imaginable, and that is the greatest objection gardeners have to it. A pyramid worthy of the name is very rarely met with, and presentable standards can only be obtained by re-grafting old trees of less approved varieties with the Jargonelle. Nor are good horizontal trees of it easily grown; in fact, it would appear to object to almost any set form of training. When once this is realised and the trees allowed to have their own way somewhat, an improvement is soon effected both in the quality and quantity of the fruit. What a Jargonelle Pear tree needs, and what it must have, is plenty of head-room. The trees should be treated much in the same way as fan-shaped Plum trees, the system simply consisting in laying in a branch wherever there is space to be filled, allowing these branches to grow unpruned till the limit is reached. It is the young, well-ripened growths that give the most bloom and the finest fruit, the former, at least, invariably being formed on the unpruned two-year-old wood. The Jargonelle will not fruit satisfactorily on either a north or north-east wall, in this respect failing where Marie Louise, Louise Boume, and other Pears succeed. The best way to form good standards is to cut over the head of some less valued tree, grafting all the points with the Jargonelle.

The Jargonelle flowers earlier than most Pears, being as a consequence more often damaged by frosts. A tree well set with fruit-buds would always pay for some kind of temporary protection. Trebled fish-nets suspended over the trees, and kept clear with the aid of long poles, will frequently save the crop.

**Planting Strawberries.**—Is the present a safe time to make a permanent plantation of the different sorts? Is there any danger of them suffering should the weather become severe afterwards?—J. McK.

\*\* December is the worst season of the year to plant Strawberries, no matter what the variety, as the plants are now at rest. If you plant now and severe weather follow, you will lose many plants. You will gain in the end by leaving the planting till March, or even April should the former month be wet, cold or frosty. You do not say if your plants are in the soil, in pots or otherwise. If in pots, plunge well over the rims of the pots in lines, well pressing the soil to the plants. This will prevent frost damaging the roots, and if in beds a little cover over the roots in the way of ashes or short litter will do good. The best month to plant for permanent plantations is August, or as soon as runners can be obtained. If planted then you will get fruit next

season, as the plants make a nice growth by the middle of October and go away freely in the early spring. If planted in spring you must not allow them to fruit the same season. You must remove all flower-trusses as they show, the plants needing all their strength to form roots and make a good crown growth for the next season. With spring planting, watering must be carefully attended to during dry weather. A mulch of rotten manure is also of great benefit.—Ed.

**Apple Cox's Orange.**—At p. 397 "Grower," in a brief note, gives us a very practical suggestion regarding the severe pruning of this Apple, and I thoroughly agree with his remarks. Some years ago I planted cordons of Cox's Orange, partly as a finish to a fruit border and with a view to obtaining fine fruits. From half a dozen trees, now at least ten years old, I have not had a peek of fruit. Cox's Orange treated thus does not fruit freely. On the other hand, from bush trees given a certain amount of freedom I rarely fail to get fruit in quantity and of a good size also, and I find the trees soon bear. Even small trees have

apparently quite a home, and I saw some very fine fruit of it there recently. The flesh is remarkably firm, of a brisk, but not very acid flavour, and this is less pronounced as the season advances. In shape it is sub-conical, and at the stem there is often a club of flesh like that in the fruit from which it takes its name. The skin is yellowish streaked with russet, the fruit solid and heavy. The tree is a free bearer, and I have noted it good in several gardens this scarce season. It does better when allowed a certain amount of freedom than if closely pruned.

**A good stewing Pear.**—I am aware we have no lack of good stewing Pears; in fact many of the dessert varieties are only fit for cooking. For autumn and early winter supplies few varieties can surpass Gilgil. This on the Pear stock is one of the hardiest of all the Pears, as in the far north it is a favourite, and rarely fails. I am aware there are later, also larger cooking Pears, but none superior in quality. The above when cooked is, I consider, our best Pear, in season from October to December. The fruits are large



*Pear Jargonelle.*

this season given fair crops. I am inclined to think severe pruning may have a great deal to do with scarcity in some places, as this variety on the Paradise stock, treated as advised, has borne grandly on the new wood of the previous year.—S. H. B.

**Pear Princess of Wales.**—The flavour of this Pear is almost as good as that of any at this season, and its handsome appearance should recommend it. The skin is rough, yellow, with dots of a greyish russet, and the flesh is very melting and pleasant. It appears to do well under any form of training, and should be worked on the Quince. If a wall can be afforded it it is of better flavour, but in a season like that just passed it is sure to ripen almost anywhere. Trees here with a south-west aspect have carried a good crop and the fruit has been much liked. It is a healthy and vigorous grower and should prove a profitable variety.—R., *Suffolk*.

**Apple Lemon Pippin.**—This is a useful late dessert Apple, good now and keeping well into the new year. In the light soil at Livermere it is

round, with a yellow skin covered with russet when ripe. I have seen very fine fruits on bus trees. It also bears well as a standard. I making new additions this Pear should find place.—S. H. B.

**Early Peaches.**—I do not quite agree with Mr. Burrell (p. 431) when he considers Amsde June poor. In the note I presume he does not refer to cropping, but to quality. The variety in question in our soil is better than either Alexandre or Waterloo and earlier. This is important. I am aware Mr. Burrell is not at all singular in his estimate of the three Peaches in question; other think the same; and I have therefore made a special study as regards the flavour of these varieties and I can see little difference. I do admit on drawback with Amsden June. It is the first of the trio to lose quality. It will not keep so long as either of the two others named, and even on walls if left too long it loses flavour. I find it necessary to go over the trees when the fruit ripening every day and not allow ripe fruits to remain an hour longer than is necessary; in fact

if anything, to gather before quite ripe if the fruits are needed for a special purpose. Of late I have been planting early varieties of Peaches in quantity, and have given Amsden June the preference. Size, colour and earliness have been considered in the selection. I find either of the three named is none too highly flavoured if grown in gravelly soil, and I also notice these early varieties need a great deal of moisture, much thinning to get fine fruits and the wood also well ripened. Early Beatrice is so poor it is not worth growing. I have an excellent variety, Early Canada, which forces well. I am now growing this in the open. I have very large trees of Amsden June, and have never yet failed to get fine fruits.—GROWER.

**Apple Seaton House.**—In many gardens of late years Apples have been largely cultivated for their size and appearance, and probably the above variety is less seen at exhibitions than some of the showier kinds. It is a grand fruit, and one of the best for gardens of limited size where many varieties are not required. Although not one of the largest Apples, with me on old trees it is above medium size and a very solid fruit. It does well in any form of tree. In light, warm soils its season is October, but in the north good fruits may be had in March. I generally use it after Cellini. It is not unlike Stirling Castle, but a better grower with me. By some it is known as Niton House. The fruits are pale green with darker streaks. Trees on the Paradise stock give earlier and larger fruit, but for keeping I advise bush trees.—G. W.

**A new white Grape.**—At page 396 "A. D." condemns the fruit committee for giving an award to the new Grape Marchioness of Downshire, and says the committee gave the award in opposition to the judgment of the best authority on Grapes in the kingdom. I think this latter remark uncalled for. The authority in question would be the last person to put his knowledge as superior to that of all others. If the fruit committee made a leap in the dark it is not the first time, and I fail to see why "A. D." should condemn a body of men simply because he ("A. D.") does not agree. I certainly voted in the majority, and consider it an excellent keeping Grape, and I know it crops well and sets well. Several good Grape growers voted for it. I think such notes as the one at p. 396 are very unfair to the raiser. As the committee were informed the variety in question cropped well and set well, I fail to see how it got an award, as "A. D." states, without particulars.—ONE OF THE MAJORITY.

**PREPARING FORCING STRAWBERRIES.**

A FEW years ago I had occasion to go into a large market garden where Strawberries are forced largely, and noted what rough-and-ready treatment the plants received in comparison to those in private gardens. As the crops were superior and the labour much less, it was an object lesson and one I was glad to follow. The old-fashioned plan of top-dressing the pot plants did not find favour, and I fail to see its utility. In my opinion food given at the surface in the form of liquid is preferable to all others. I do not believe in the strong doses of artificial manure often given to plants in fruit, as I think it affects the flavour; indeed, after many years' trial I find ordinary liquid manure from stables the best food, with occasional supplies of soot water. In many gardens it is considered necessary to top-dress each plant before starting. This in inexperienced hands is the forerunner of blind plants and weak flower-trusses, the plants in some instances being unable to throw up strongly. I am aware excess of heat, want of air, and other defects contribute to the above evils, but the top-dressing is often the first and can readily be avoided. The usual plan of removing 2 inches or so of soil from the surface also is quite unnecessary, and where there are thousands of plants it takes much time. The plants when placed in their forcing quarters do not need this new soil for many weeks, the result being it is more difficult

to water those with a portion of new soil added, as this remains moist. The older soil, being a mass of roots, dries quickly. It is necessary to remove any weeds or mossy growths from the surface. Should food be necessary (which is rarely the case at the start), it may be given in a liquid state in preference to top-dressing. In an excellent note on pot Strawberries, "J. C. B." at page 391 dwells upon the importance of good plants, and gives cultural details how to secure them, and though he but briefly touches on the forcing, I note he lays stress upon the importance of good plants, and deprecates strong stimulants. I quite agree with him. The best fruits I have ever had were from plants fed with soot-water only. I think the strong fertilisers used now, mixed with soil as a top-dressing, harmful, as the plant having but few leaves is unable to absorb the food, and the plants cannot be forced hard to get new growth.

G. W.

**BOOKS.**

**THE PRINCIPLES OF FRUIT GROWING.\***

THIS, the latest addition to the Rural Science Series, edited by L. H. Bailey, of the Cornell University, New York, is, I think, the most valuable. Without being actually a new departure in the literature of the fruit garden, it is yet conceived and conducted on original lines, and compares most favourably with the dry matter-of-fact attempts in a similar direction to which we are accustomed on this side of the Atlantic. It is not a case of attempting too much and doing nothing thoroughly, but every page is replete with matter that both interests and instructs the reader. Professor Bailey has the happy knack of conveying a mass of valuable information in the most simple manner. Too often experts wrap up what they wish to convey in so much verbiage, various technical and scientific phrases accompanying their remarks, much of which might frequently be dispensed with, together with numerous tables and statistics galore, all of which confuse the issues and bewilder the average reader. These mistakes are not made by the majority of American writers. "The Principles of Fruit Growing" contains a surprising amount of original and selected information, conveyed in a condensed, yet perfectly understandable form. Not content with the experience gained on the fruit farm connected with the Cornell University, Mr. Bailey has hunted up and quoted freely from all the best American and English authorities on fruit culture, also collating information upon various important points from the leading fruit growers all over the United States, hence the great value of his painstaking work. Local experience is all very well in its way, but it is not generally reliable. What answers admirably in one district may fail conspicuously in another part of the country, and the difficulty is met by giving the "Principles of Fruit Growing" an almost universal character.

When shall we be favoured with an equally well-thought-out and clearly-written work on hardy fruit growing in this country, published at a popular price? (The book under notice is sold at 5s.). Mere reports on experiments or descriptions of fruit culture conducted in any one given locality do not, for reasons already hinted at, meet the case. We want reliable information upon various points. We ought to learn more about the behaviour of both kinds and varieties, and which are the most profitable to cultivate in different parts of the country; the effects of soils and manures upon the trees and bushes and their produce; the positions that give the most satisfactory results; protective measures found the most efficacious against frost, diseases, insect pests; marketing, packing, and the like. This information should be collected from all parts of Great Britain and Ireland and edited by an ex-

\* "The Principles of Fruit Growing." By L. H. Bailey. London: Macmillan and Co.

pert who, like Professor Bailey, is also a practical fruit grower. Perhaps this will come when we have State-aided training and experimental farms. At present we are quite left in the lurch by our rivals and friends in America.

One point is always observable in Professor Bailey's writing—he never misleads, and in particular guards himself against raising false expectations. He maintains, and rightly so, that both pleasure and profit are to be derived from fruit culture, but never omits pointing out that it is all a question of capability for the line pursued. Where one man would succeed another would starve. Personal superintendence is everything. This is what he says as to the prospects of beginners:—

It is indisputable that there is always a demand for the best. There is not enough of the best in any commodity. A man cannot make the best unless he has the ability for it. It is more important, therefore, that the first tillage and fertilising and pruning and spraying should be applied to the man and not to the land nor the crops, and whilst the man is acquiring discipline for the direct prosecution of his business he is at the same time opening his mind to all the sweetest pleasures of living. On the other hand, there is always a surplus of the ordinary. In fact, it is the ordinariness of it which makes the surplus. . . . This demands that we define what is commonly meant by the best. That kind of fruit usually sells the best of which there is the least. It may not be intrinsically the best. It is simply that in which there is the least competition. The key-note to the business, therefore, is diversification or individuality. The grower should aim to have something which his neighbours do not do, although it may really not be any better than what they do. . . . He need have no fear of his success if he grows what people want or puts it up so as to make them believe they want it.

Much more is written in this strain, and the sound, practical advice given ought to be carefully read and acted upon by many comparatively "old hands" as well as beginners.

The chapter on "The Location and its Climate" is specially interesting to me, and doubtless will be to many other British readers. I have recently been engaged in a small way collecting information on the effect of locality upon the crops, or, in other words, the best positions for orchards, the value of shelter trees, wind-breaks, and other points for the benefit of Gloucestershire and Somersetshire farmers, and to this now can be added what Professor Bailey has published on the subject. Opinions vary considerably as to the best positions for orchards as well as the value of wind-breaks. On the whole, the balance is in favour of shelter trees and wind-breaks, but there is a surprisingly strong case against them. We have not the same difficulties to contend with in the matter of injuries from severe frosts while the trees, bushes, and plants are at rest, and it will be news to many readers that in various parts of the States they are nearly as much liable to have their prospects marred by frosts as we are in this country. Spring frosts are among the worst of our drawbacks, but a perusal of Professor Bailey's work will convince readers that we have not a monopoly of that particular bugbear.

Equally interesting and instructive is the chapter on the tillage of fruit lands. What is said on this subject both for and against tillage among fruit trees is well worthy of careful attention, but there is no mistaking the fact that tillage of the ground has a most beneficial effect upon the trees occupying it, and ought not really to cease for at least ten years after planting. This rule applies to our country as well as to America, and this season the difference as regards the weight and soundness of fruit in favour of trees on cultivated ground compared with those obtained from trees in uncultivated orchards is more marked than usual. Here is what we find advanced on page 139 on "The Philosophy of Tillage":—

1. Tillage improves the physical condition of the land: (a) By tining the soil, and thereby presenting greater feeding surface to the roots; (b) by increasing the depth of the soil, and thereby giving a greater foraging and root-hold area to the plant; (c) by warming and drying the soil in spring; (d) by reducing the extremes of temperature and moisture.

2. Tillage may save moisture (e) by increasing the water-holding capacity of the soil; (f) by checking evaporation.

3. Tillage may augment chemical activities (a) by aiding and setting free plant-food (h) by promoting nitrification; (i) by hastening the decomposition of organic matter; (j) by extending these agencies (g h i) to greater depth of soil.

The chief beneficiaries of the experiment of treating fruit trees similarly to forest trees, planting thickly and not cultivating between, of which there are innumerable instances in this and adjoining county of Gloucester, are said by Mr. Bailey to be bugs, mice, and fungi, all of which would vote the method a success. I should have added grubs or the larvae of several most destructive insect pests. In this connection we are given full accounts of all the methods in vogue of tillage and cropping between fruit trees, with remedies for unprofitable orchards. Next we come to an exhaustive chapter on "The Fertilising of Fruit Lands," and many and easy to follow are the hints given. Of the necessity for manuring orchards there can be no two opinions, and owners ought first to read the information of this important part of the subject, and judge for themselves which of the many methods on fertilising the ground will best meet their case. At the end of this chapter, among the summary conclusions occur the following instructive remarks:—

The grower should also remember that the plants need all the elements of plant growth, and not one of them alone. For example, a heavy application of nitrogen upon soil which is deficient of potash and phosphoric acid cannot be expected to give useful results. In the same way, the application of potash to the soil which is very poor in nitrogen or phosphoric acid would be comparatively useless. The heavy loamy or clay lands nearly always contain an abundance of potash and phosphoric acid in a more or less unavailable condition, and much of these materials can be liberated to the plant by careful tillage and the incorporation of humus. However, it is nearly always advisable in orchards which are bearing to add these materials in the shape of manures or concentrated fertilisers. The quickest results following the use of fertilisers will be seen upon the sandier lands. Two or three years often elapse after the application of chemical fertilisers to heavy lands before any decided results are observed. In other words, clay lands ordinarily show quicker results from tillage than they do from the application of fertilisers. The farmer should bear in mind that he should never rely exclusively upon chemical plant foods, because they contain no humus and the soil is apt to become hard and lifeless. They should be used in judicious rotation, or in connection with cover crops, or stable manures, or applications of muck or some other organic dressings. It is not necessary that the chemical fertilisers should be mixed before application; in fact upon lands of varying soil and conformation, it is ordinarily better to apply different ingredients separately, because different parts of the plantation may need different amounts of the various materials. The low lands will ordinarily need less of the nitrogen and perhaps more of the potash and phosphoric acid. In general it is advisable to buy the plant foods separately as advised in the preceding page.

"The Planting of Fruit Ground" is the heading of another long chapter, and this is followed by "The Secondary and Incidental Care of the Fruit Plantation," both chapters being exhaustive and to the point. The effects of frosts upon both the trees and the flowers are dwelt upon at considerable length, various illustrations of frost effects accompanying these remarks. Diseases, insects and spraying all come in for a full share of attention. Then follows much good advice upon harvesting and marketing fruit, with diagrams of every appliance used in connection with this important work, and there are also various illustrations of the best forms of storage houses to be found in America. Near the end of the book may be found much that is interesting concerning the distribution of the vast quantities of fruit grown in America, and once more I would quote a passage for the benefit of the slovenly and not unfrequently fraudulent packer of fruit in this country. All that is advanced under the sub-heading "The Grower and Consumer" is worthy of reproduction, but

I must content myself with this selection from it:—

It should first be said that the fruit itself is the best business card which the grower can have in the long run. Fruit which is well grown and well packed is already virtually sold. If the consumer is convinced of the honesty and good faith of the grower and the packer, then his suspicions are allayed, and he is willing to purchase freely and at a fair price. . . . The time is certainly coming when an inferior grade of fruit cannot be put upon the market with profit. Competition is gradually increasing, and it is only the better grades which can pay for the expense of shipping and packages and selling and leave a margin of profit to the grower.

I am afraid Professor Bailey would have but a poor opinion of the methods and practices of the bulk of those who consign fruit to Covent Garden Market. Surely no such primitive, rough, and in many cases tricky methods of packing, nor such large quantities of inferior produce could be found in any American fruit market. W. I.

## SOCIETIES AND EXHIBITIONS

### NATIONAL CHRYSANTHEMUM SOCIETY.

On this occasion the whole of the exhibits were arranged in the south-western gallery, and although the display will not bear comparison with that made last year, yet, considering the damp and foggy weather lately experienced, it may be considered an interesting one. A few changes made in the schedule of prizes offered on this occasion, were not productive of any particular change. Looking at the show from the point of view of bringing out varieties which may be characterised as being naturally late, there was nothing noticeable in this respect, but instead a repetition of sorts staged at both the October and November shows appeared to be the rule. This is to be regretted, as there is plenty of room for improvement in the late-flowering varieties, and it is only natural to expect that one of the chief points of interest in a display made so late in the season should be to give prominence to the sorts naturally late-flowering. A class for plants (single varieties) bush grown, trained or untrained, failed to attract a satisfactory entry, only one exhibitor making a display, and this with plants distinctly unworthy of the occasion. The trade display assisted very materially to compensate for the poorness of the entries in the competitive classes, both Mr. H. J. Jones, Lewisham, and Mr. W. Wells, Redhill, staging handsome exhibits. The decorative exhibits, too, in the non-competitive classes were very pleasing, and these, together with tables of miscellaneous plants and others containing Cyclamens and Primulas, each contributed in no small degree to make an interesting display. It is pleasing to record an improvement in the lighting arrangements, the recent remarks in this respect evidently having had the desired effect.

#### PLANTS.

Only one entry was forthcoming in the class for six specimens, single varieties, bush grown, trained or untrained. These were a very poor lot indeed, and quite unworthy of a national show. A third prize was awarded to Mr. W. C. Pagram, gardener to Mr. J. Courtenay, Weybridge.

#### CUT BLOOMS.

The class for twenty-four Japanese Chrysanthemums, not less than eighteen varieties and not more than two of a variety, brought out four competitors, Mr. W. Messenger, gardener to Mr. C. H. Berners, Woolverstone Park, Ipswich, being an easy first with a very handsome lot of blooms. His best were Mme. Carnot, E. D. Smith, Simplicity, Rose Wynne, Ialene, C. W. Richardson, Col. T. C. Bourne, Silver King, Etoile de Lyon, Mlle. A. de Galbert, G. C. Schwabe, and a grand flower of Golden Gate. The second prize fell to Mr. W. Slogrove, gar-

dener to Mrs. Crawford, Gatton Cottage, Reigate his most conspicuous blooms being Waban, Oceana, G. J. Warren, Miss Maggie Blenkinson, Mme. Carnot, Niveum, Bellum, and M. Chenon de Léché. Mr. Norman Davis, The Vineries, Framfield, Sussex, was the only competitor in the class for twenty-four bunches shown in bottles provided by the society. These, almost exclusively Japanese varieties, were very informally arranged, and included many of the leading novelties. The flowers were large, full, of good colour, and fresh. Four nice boards of blooms were shown in the class for twelve Japanese distinct, the margin of superiority in the first prize stand being very narrow indeed. This was awarded to Mr. Messenger, who had fine examples of Mme. Carnot (probably the best Japanese in the show), E. D. Smith, Etoile de Lyon, C. W. Richardson, G. C. Schwabe, Silver King, Golden Gate, Niveum, Snowdon, Phœbus, Miss Maggie Blenkinson, and Mutual Friend. Mr. R. Kenyon, gardener to Mr. A. F. Hills, Monkams, Woodford, was a close second, his stand being a remarkably even one, and his blooms fresh and of good colour. Julie Scaramanga, Australie, Mrs. W. H. Lees, and Col. T. C. Bourne were specially deserving of praise. A brisk competition for six Japanese followed, leading honours going to Mr. C. Cox, gardener to Mr. J. Trotter, Brickenden Grange, Hertford, with a capital stand of flowers. Edith Tabor was very fine, its pure yellow and exquisite form being much admired. Mme. Carnot, Mrs. W. H. Lees, Mrs. Chas. Blick, and a splendid bloom of M. Chenon de Léché call for special notice. Mr. Kenyon was again second with blooms noticeable for their fine colour. The class for twelve incurved, not less than six varieties and not more than two of one variety, produced four capital lots. First prize deservedly went to Mr. W. Neville, gardener to Mr. F. W. Flight, Cornstiles, Twyford, Winchester, for a stand containing flowers of large size and very neat and even. We very much doubt if a finer lot has ever been staged at this show in any previous year. His varieties were Ma Perfection, The Egyptian, Miss Dorothy Foster, Major Bonafon, John Fulford, Mrs. R. C. Kingston, and Bonnie Dundee. The second prize was secured by Mr. T. Robinson, gardener to Mr. W. Laurence, Elmsfield House, Hollingbourne, for a less even lot of flowers. For six incurved, distinct, Mr. R. Basil, gardener to Mr. D. H. Evans, Shooters Hill, Pangbourne, had a nice lot of flowers. Chas. H. Curtis, Mrs. J. Gardiner, and a splendid flower of Bonnie Dundee were among his best. Very closely followed Mr. Neville, who had a very neat lot of flowers, Mrs. R. C. Kingston being in fine form. Only two competitors entered the list for twelve bunches Japanese, not less than six varieties, three blooms in a bunch, shown in bottles. Mr. W. Howe, gardener to Mr. Henry Tate, Park Hill, Streatham Common, had a beautiful lot of blooms in wonderfully fresh condition. These were admirably set up. Mr. Norman Davis was second, his blooms not being set up so well as the first prize lot. Four competitors staged exhibits in the class for six bunches Japanese, three blooms of one variety in each bunch. Here Mr. Norman Davis was first with capital examples of Georgiana Pitcher, Geo. Seward, Oceana, Western King, Etoile de Lyon, and Mlle. J. Bernard. Mr. W. Slogrove was a good second, C. W. Richardson and Oceana being two of his best sorts. In a class for twelve bunches large-flowered single varieties, three blooms only of one variety in a bunch, Mr. G. W. Forbes, gardener to Mme. Nicols, Regent House, Surbiton, Surrey, had a magnificent lot of flowers, though too formally set up. They were large, of good colour, and the colours pleasingly disposed, Admiral Symonds, Miss Grace Rennie, Tuscols, Rudbeckia, and Rev. W. C. Remfrey being the best. To Mr. A. Felgate, gardener to Her Grace Elizabeth, Duchess of Wellington, Buthill, Walton-on-Thames, second prize was awarded, Yellow Giant and Captain Felgate standing out conspicuously in his exhibit. For six bunches of the same type

Mr. W. Felgate, Jun., nurseryman, Burhill Road, Walton-on-Thames, was first, being the only exhibitor. The small singles were charming, the class for twelve bunches, three blooms in each bunch, again finding Mr. Forbes in the leading position. Mr. A. Felgate followed with less even flowers. For six bunches small-flowered singles, three blooms in a bunch, Mr. Felgate was again first, C. Pearce, Arthur, and Fragile being very pretty. A special prize offered by Mr. C. W. Richardson, Sawbridgeworth, open to single-handed gardeners only, for twelve Japanese blooms, distinct, found only one competitor, Mr. F. Bush, gardener to Mr. W. T. Lister, F.R.C.S., Rose Hill, Totteridge, showing an indifferent lot of flowers. A new division for amateurs who mainly, if not entirely, cultivate their plants was made this year, and contained three classes. No exhibitor, however, was forthcoming. In the amateur classes, division B, open to those who grow the plants themselves, four competitors entered for six Japanese, not less than four varieties and not more than two of one variety, Mr. Geo. Heal, Holly House, Compton, Guildford, was placed first, Mons. Gruyer, Golden Gate, and Mons. Chenon de Léché being his best examples. For six bunches only one lot was staged, and this was very poor. The class for a vase of Chrysanthemums, arranged with foliage, berries, and grasses, brought out only one competitor, Mr. D. B. Crane, Highgate, showing a bold arrangement.

## CYCLAMENS, PRIMULAS, &amp;c.

Mr. William Orpwood, nurseryman, Uxbridge, exhibited a fine table of Cyclamens in pots in the class for a collection of Cyclamens. These were a grand lot of plants, fresh and healthy, freely flowered and of good colour, securing first prize. For twelve Cyclamens in pots, from which nurserymen were excluded, Mr. W. Frost, gardener to Mr. G. Ashley-Dodd, Godington, Ashford, Kent, was placed first for a splendid lot of plants with large blossoms freely produced. Mr. W. Rapley, gardener to Mr. H. Grinling, Harrow Weald House, Stanmore, was second with much smaller plants, but fresh. For a collection of *Primula sinensis* (open) Mr. J. Gibson, gardener to Mr. E. H. Watts, Devonhurst, Chiswick, secured leading position with a large table of plants very tastefully arranged, and edged with *Panicum variegatum*, with *Crotons* and *Cocos Weddelliana* associated to produce effect. Mr. Orpwood was second, with small market plants, and tied in a very stiff manner. For twelve *Primula sinensis* (nurserymen excluded) Mr. W. Mease, gardener to Mr. A. Tate, Downside, Leatherhead, was an easy first with freely-flowered double sorts and beautifully finished, Mr. Gibson following with single-flowered forms. The new class for nine winter-flowering *Begonias* (open) does not appear to have found favour, no single exhibit being in evidence. For a collection of flowering, berried and leaf-foliated plants, arranged for effect on a table 1 feet by 6 feet (open), Mr. W. Howe made a very handsome display. Surmounted with a fine specimen *Cocos Weddelliana* encircled by wonderfully fine *Poinsettias*, the table space was splendidly arranged with *Bouvardias*, winter-flowering *Begonias*, *Solanums*, *Roman Hyacinths*, *Crotons*, *Primulas* and other useful flowering and leaf-foliated plants with an edging of *Panicum variegatum*. The whole arrangement evinced much taste. Special interest was manifested in the class for a basket of autumn foliage and berries, in which there were no less than ten competitors. The first prize ultimately went to Mr. A. Newell, gardener to Sir Edwin Saunders, Fairawn, Wimbledon Common, for a rather cumbersome arrangement, which included a fine variety of berries. Second prize fell to Miss C. B. Cole, The Vineyard, Feltham, for a neat and lightly-ranged basket in which the new *Physalis* played an important part. A very lovely basket, given an extra prize in this class, was well worthy of a higher position.

## MISCELLANEOUS.

Mr. H. J. Jones, Rycroft Nursery, Lewisham, had an immense table, in which each type of the

Chrysanthemum was represented. Large vases, each filled with one variety only, were arranged down the centre of the table, the spaces on either side being filled with small tubes and an immense number of boards of specimen exhibition flowers. Fine-foliated plants were pleasingly associated, giving the necessary finish to this welcome display. We noticed among the novelties *Mary Molyneux*, the now mauve-pink Japanese incurved; *W. Wright*, a capital late sort; *C. W. Richardson*, a Rycroft seedling; *Julie Searmanga*, and *Mrs. R. Jones*, a fine white (small gold medal). Mr. W. Wells, Earlswood Nurseries, Redhill, also had a fine display. Large Japanese incurved and singles, besides decorative varieties, were each represented (silver-gilt medal). Messrs. H. Cannell and Sons, Swanley, set up a grand bank of zonal *Pelargoniums* in great variety, each bunch exhibiting fine form, splendid colour, and large trusses. *Cannas*, decorative *Chrysanthemums*, and a capital collection of vegetables secured an award of a silver-gilt medal. Mr. W. J. Godfrey, Exmouth, Devon, had a large collection of cut *Chrysanthemums*, mostly shown in bunches, and including such sorts as *Mrs. H. Robinson*, *H. W. Rieman*, *Jeannie Falconer*, *Georgiana Piteher*, and *King of Plumes* (silver medal). Mr. J. R. Chard, The Florist, Stoke Newington, N., exhibited a very handsome table of his many devices and designs, arranged with *Chrysanthemums* and other flowers, besides bouquets, &c., each showing splendid taste and artistic skill, receiving a silver-gilt medal. Mrs. W. Green, jun., The Florist, Harold Wood, Essex, had a similar table, but a considerably less quantity of devices, &c. (silver medal). Mr. J. Williams, Ealing, had his pretty rural designs set off on a large table. Mr. W. Neville exhibited thirty incurved blooms of large size, good colour, and very neatly finished, a small silver medal being awarded. Mr. T. Robinson also staged, not for competition, eighteen Japanese and incurved blooms in variety. Mr. R. Bassil exhibited an interesting collection of salads (small silver medal); Mr. J. R. Tranter, Henley-on-Thames, twelve blooms new Japanese *Mrs. J. R. Tranter*; Mr. A. Merridew, The Gardens, Camberwell House, Camberwell, S.E., an *epergne* of *Chrysanthemums* and *Orchids*, and Mr. R. Owen, Maidenhead, a grand table of *Chrysanthemums* with a front of eight dozen exhibition blooms (small silver medal). A most delightful hand-basket of *Mrs. William Filkins*, decorative yellow *Chrysanthemum*, arranged with exquisite taste, by Miss Easterbrook, Fawkham, Kent, secured a bronze medal. Mr. W. Taylor, gardener to Mr. C. Bayer, Tewkesbury Lodge, Forest Hill, S.E., staged eighteen bunches of *Grapes* in excellent condition, including *Muscat of Alexandria*, *Gros Colman*, *Lady Downe's Seedling*, &c. (silver-gilt medal).

The floral committee met at 1 o'clock, when the following awards were made. A first-class certificate was given to—

**CHRYSANTHEMUM MISS PHYLLIS FOWLER.**—A large incurved with florets of medium width, somewhat pointed; colour primrose-yellow. Sent by Mr. T. Robinson, gardener to Mr. Watkins Laurence, Elmsfield House, Hollingbourne.

*Mrs. Caterer*, a beautifully chaste, pure white, large *Anemone*, and as a decorative variety invaluable, from Mr. H. J. Jones, Rycroft Nursery, Lewisham, S.E.; *Red L. Canning*, a useful reddish crimson Japanese variety and commended as a market sort, from Mr. A. Felgate, The Gardens, Burhill, Walton-on-Thames; and *Mrs. M. Simpson*, a large Japanese reflexed, paper-white, with florets of medium width, erect, and of good substance, from Mr. N. Molyneux, Rookesbury Park, Fareham, were commended.

The committee wished to make a correction. At their last meeting a bloom was certificated under the name of *Violacemum*. Its correct name should be *Dennis Smith-Rylands*. It will be sent out by Mr. H. J. Jones.

**Royal Horticultural Society.**—The last meeting this year of the above society will take

place next Tuesday, the 14th, in the Drill Hall, James Street, Victoria Street, Westminster, when the committees will meet as usual at 12 o'clock. A lecture on "Sporting in Chrysanthemums" will be given by the Rev. G. Henslow, M.A., at 3 o'clock.

## NOTES OF THE WEEK.

**Chrysanthemum Tokio.**—Among decorative varieties this kind, though old, is still worth attention for its fine effect when grown in bush form. If the plants are stopped twice, a dozen good flowers and of a useful size may be secured.

**Chrysanthemum Oceana.**—This handsome variety is probably one of the finest of its colour—a rich golden yellow—that has been introduced into the Japanese incurved section. The very broad florets are a special feature of this, while its whole form is bold and massive.

**Agathæa cœlestis.**—This is one of the few blue flowers that come freely in winter, or, indeed, at almost any season of the year. Established pot plants that have been pinched during summer produce quantities of the deep sky-blue flowers for a long time. A few of these with *Fern* or *Asparagus* in small specimen glasses are always pleasing.

**Acacia armata.**—For forming into small, compact bushes for autumn and winter flowering this is one of the most useful of a rather extensive genus, the dark green bushes freely laden with golden blossom rendering the plants quite attractive. It is also a vigorous species, and calculated to endure a certain amount of hardship with impunity.

**Centropogon Lueyanus.**—This old-fashioned greenhouse shrub is now flowering in small pots in groups in one of the greenhouses at Kew. It is one of the old-fashioned things that a decade or two back were often seen blooming in the cool conservatory at this time, but which in many instances have been discarded because the flowers are not suitable for cutting. We should rather welcome plants that cannot be thus ruthlessly cut down the moment the heads of blossom are expanded.

**Hæmanthus pubescens.**—This is one of the large, ovate-leaved section, the broad blades of deep green recurring as soon as they are freed from the bulb. A little later a fine bold truss of snow-white flowers issues from the centre, and, attaining a height of 6 inches or 8 inches, remains in good condition a long time. The above is now in flower, and very attractive are the large pure heads of blossoms. A cool house and a dry, airy atmosphere are best suited to these plants.

**Senecio junceus.**—This is a very distinct species of *Groundsel* from the Cape of Good Hope, with, as implied in its specific name, Rush-like stems and growths generally. These growths, rising from a clustered tuft, are dark green and smooth, the small bright yellow blossoms appearing on the sides of the stems. The very peculiar habit of the plant, the stems being destitute of any leafy growth, renders it a curious and interesting species.

**Crassula lactea.**—As a basket plant, flowering during the winter months, this species with its creamy white flowers is always welcome. To ensure flowering at this season it is necessary to make an early start with the cuttings, selecting for this purpose the nearly full-grown rosettes that cluster around the large established plants. Prior to rooting very little moisture is needed, if at all, and at any time only moderate watering is necessary.

**Lonicera Standishi.**—Those who have large plants of this know full well the value of its fragrant blossoms in the winter when such things are by no means plentiful. Its chief drawback perhaps is that the plants lose the bulk of the leaves at this season, but still the fragrance greets one in passing a few bushes or even a solitary one in the open where the position is sufficiently favoured for it to blossom. As a pot plant in the cool greenhouse it is also worth attention.

**Diplacus glutinosus.**—An old-fashioned greenhouse plant that is well known and often met with at this season of the year. In pots 5 inches across a good-sized plant will develop

many of its curiously coloured flowers. If placed in the open garden it is always pleasing, and provides an informal group not of daily occurrence. Quite recently one or two new varieties have appeared, and though differing in shade of colour somewhat, are not a great advance on the old form.

**Lily of the Valley in fruit.**—A group of Lily of the Valley in fruit has certainly a very pretty effect when the fruits are ripe and in good large clusters, but it is gained only at the expense of great weakening of the crowns, and should not be encouraged by those who want good flowers, or permitted in any case except where the plant is naturalised. In the light soil here seeding is more or less common every year, and if a plentiful crop of seeds is left to mature, the flower-spikes are less than half their normal size in the ensuing season.—J. C. T., *Livermere Park, Bury St. Edmunds.*

**Nerine crispa.**—Notwithstanding there are many varieties of this group with much larger and more brilliant flowers, the kind here mentioned surpasses many of them in its simple grace and beauty. Happily, too, it is of very easy culture, and the bulbs being of small size, several may be grown in a 5-inch pot. Given ordinary treatment, there is no reason why a large number of tubers should not flower. Another very useful kind in the same way is *N. undulata*, in which the sepals are wavy more or less throughout their length, and it is quite easy to have four or six flowering bulbs in a 4-inch pot. In a cut state these smaller forms, even if less brilliant, are quite effective when associated with suitable material.

**Callipsyche aurantiaca.**—A very distinct and attractive member of the Amaryllidaceæ, though not often seen beyond the limits of the botanic garden. The above species is one of the most striking, and usually flowers during the late autumn months. At this time a tall scape fully 2 feet long rises from the bulb, and is crowned by an umbel of deep golden yellow flowers, the latter in form resembling those of a small Day Lily. Like many other plants of this order, the scape, as also the flowers, which are each fully 2 inches in length, appear in advance of the foliage. The species belongs to the Andes of Ecuador, and delights in loam and peat with plenty of moisture during the season of growth. The plant is well suited to the warm greenhouse.

**Iris reticulata in pots.**—When well grown there is a charm about this lovely Iris that renders it unique, more particularly the strong violet perfume of its flowers. For some two or three weeks past the leaves have been above ground, which in this locality is earlier than usual. Those who grow this Iris in pots will be glad to know that if bulbs are now introduced into slight warmth, such as the shelf of the greenhouse quite near the glass, flowers may be expected early in January. In sheltered positions in the open in mild seasons the flowers appear early in February, so that slight warmth, or little more than the exclusion of frost, should make the difference named above. A couple of dozen pots would keep up a succession of flowers for a long time.

**Chrysanthemum naturally grown.**—For late bloom the variety *Niveum*, beautiful sprays of which come to us from E. Molyneux, Swanmore Park, is invaluable. The medium-sized flowers, of the purest white and produced in clusters, are very useful at Christmas for table decoration and such like. In order to obtain such results, Mr. Molyneux strikes the cuttings in February, pinching out the points of the plants when 1 foot high, all the shoots resulting from this check being retained. When all fear of frost is over, the plants are put out in an open piece of ground and kept well watered if the season be dry. They are lifted in October, and all the buds that form are allowed to develop. One valuable characteristic of *Niveum* is the freedom with which it throws up cuttings.

**Carnation Reginald Godfrey.**—So far as the size of blossom is concerned, this variety is

larger than most of those of its shade of colour, which is pink. I do not know the history of this variety, but it appears to be of the same strain as *Mme. d'Albertina*, but more refined than this, which is of American origin. Both are of the fringed class and quite devoid of fragrance: indeed, the latter item would appear to be quite disregarded by raisers of the winter-flowering section, as scarcely one variety in ten is sweet-scented. A good looking pink variety recently noted was named *Pride of Exmouth*. It is a full-centred flower, a large Joliffic type in both colour and form. It is, however, uncommonly near to another pink variety, *Mrs. H. Little*, if not indeed identical. As we have only seen flowers of these we are unable to say whether they are perpetual flowering or not.

**Nursery rubbish.**—The quickness with which weedy shrubs grow is taken by many as a sign of their merit, and the use of the really good hardy evergreens is set aside for some rapid growing forms of the Privet, which is a weed among shrubs. The town of Leicester is one of the places which we have lately seen overrun with it. In the parts of the town with many villas and not ugly gardens there are miles of this rank-growing Privet, forming hedges between the gardens and the roads. The hedges, having got a little old, are now decayed in parts, show a bad, poor colour for a background, and are absolutely useless as a fence. Unless supported by iron, the Privet is useless for fulfilling the work of a fence. The time it appears to save is really lost, because the years that brought it to its present pass would have led to a stout, handsome growth of Holly, Box or Yew, while the result of using Privet is deplorable.

**The alpine Clematis (Atragene alpina).**—In your "Wild Garden" *Atragene alpina* is mentioned as a plant apparently easily grown and likely to succeed. I have three or four strong plants here in different positions, but have never been able to induce them to grow. Mr. Wolley-Dod tells me he has half-a-dozen plants with a like result, and adds that he has never seen the *Atragene* succeed in cultivation. Most things will grow here, and I should be much obliged for any hints on the above plants through THE GARDEN.—E. C. BUXTON, *Bellus-y-coed.*

\* \* The alpine Clematis is really very easily grown, and as hardy as a Bramble. We have had it on both the north and south sides of the same wall, quite happy without any attention for years. Get healthy young plants and you need have no trouble with them. One of these plants growing in a gravel walk flowers profusely every year.—Ed.

**Begonia Veitchi.**—It is about twenty-five years since the first tubers of this handsome and nearly perfectly hardy species came into my hands, the tiny tubers certainly not larger than a fair-sized Pea. I grew one of these till it was nearly or quite 5 inches across, when, unfortunately, it came quite suddenly to grief. During the last year of its existence the plant was grown in a 9-inch pot. Happily, too, I was able to secure a large quantity of seed of this lovely plant, and though by this time it had been reduced in price, it was by no means common. Such a tuber of this species I have never seen before or since. These comparatively hardy sorts, e.g., *B. Froebeli*, *B. octepetala*, and the above, may be safely wintered in a frame from which frost is excluded, and by laying the pots on their sides and withholding water entirely, the tubers are quite safe in the pot and soil in which they flowered. I have frequently wintered the above in a cold frame, merely putting a handful of cocoa fibre over the crown of the tuber.—E. J.

**The weather in West Herts.**—During the past week the temperature has been remarkably changeable. The highest readings in the screen ranged between 34° on the coldest day to 53° on the warmest, while the night temperatures were equally variable. On the night preceding the

4th, the exposed thermometer indicated 13° of frost, which is the greatest cold registered by it since the end of March. The soil is now about 1° warmer than is seasonal at 2 feet deep, and about 3° warmer at the depth of 1 foot. Since the month began there have been frequent falls of rain and snow, and the total measurement has amounted to about an inch. About three-quarters of an inch of rain fell on the 7th. This fall, although in no way remarkable in itself, was nevertheless noteworthy as being the heaviest in any single day for exactly six months. Throughout the night of the 7th the wind remained high, and during the hour ending 3 a.m., the mean velocity reached 20 miles, direction W. The two first days of the present month were remarkably sunny for December, but since then the sun has shone for altogether only about a quarter of an hour.—E. M., *Berkhamsted.*

**Royal Horticultural Society's awards.**—At p. 394 I notice severe strictures are passed on the awards given at the meeting on the 9th ult. Of course it is impossible to please all. I am aware at times the exhibits before the floral committee are numerous, and the judging of groups is in consequence delegated to two or three persons. Could the chairman go round, it would be all right. Could not the authorities delegate members knowing the plants and place more members at the work—in fact, the whole committee whenever possible? The names of exhibitors should not be exposed to view till the award is given.—A LOOKER-ON.

## PUBLIC GARDENS.

**Metropolitan Public Gardens Association.**—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., Lord Teynham, deputy chairman, presiding, on the motion of Sir William Vincent a resolution was unanimously passed expressing great regret at the death of the vice-chairman, Lord Dorchester, who had taken an active interest in the work from its commencement fourteen years ago. It was agreed to make some improvements in St. Nicholas's Churchyard, Deptford, with a view to its use by the public, and to prepare a plan for the further laying out of St. John's Churchyard, Hoxton, and to replant some trees and shrubs in Whitechapel Road, and in St. Stephen's Churchyard, Bow. Progress was reported in the laying out of the East Street Recreation Ground, Walworth, the disused burial ground in Kipling Street, and St. George-the-Martyr Churchyard, and it was decided to commence as soon as possible the laying out of Charles Square, Hoxton, and Albion Square, Dalston. It was announced that the Oval, City Road, had been completed and opened to the public by the St. Luke's Vestry, the association having provided seven seats. A number of other schemes in connection with the acquisition and laying out of grounds in Camberwell, Blackfriars, Walworth, Ratcliff, New Kent Road, Putney, and other places occupied the attention of the meeting.

**The Eucharis mite.**—I shall be obliged if you will tell me if the enclosed *Eucharis* bulbs are infected with the mite. The leaves are all going yellow and dying away. The plants have not been disturbed for years, and I find on turning them out of the pots the soil has got very sour. They have been growing in a stove all summer with very little ventilation. I have grown and flowered *Eucharis* successfully for several years, so if the enclosed bulbs are infected with the mite it is the first time I have had to deal with it.—GARDENER.

\* \* The *Eucharis* bulbs you sent were not attacked by the bulb mite. I examined them very carefully and could not find a single specimen on them. As far as I could see, the bulbs appeared perfectly healthy. Probably the sour soil and want of proper ventilation have caused the leaves to die away.—G. S. S.

# THE GARDEN.

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## CHRYSANTHEMUMS.

### STAGING CHRYSANTHEMUM BLOOMS IN VASES.

At the late Jubilee exhibition held in Edinburgh the numerous exhibits of Chrysanthemums staged on long stems arranged in vases were quite a feature. If my memory serves me right, it was the Scottish Horticultural Association who initiated this method of staging both Japanese and incurved blooms on long stems about three years since. It is a step in the right direction of making the autumn shows much more interesting. There is certainly a drawback even to this plan, viz., the difficulty of conveying the blooms to the shows. To illustrate what energy can do when stimulated with some tangible reward, the whole of the six prize-winners in that one class resided some 90 miles from the show. In fact, one travelled some 500 miles, and staged his blooms so well as to secure the fourth prize in a strong competition. The wording of the class was as follows: "Twenty vases, three blooms in each, twenty varieties, Chrysanthemum foliage only to be used." It has been found that Chrysanthemum blooms staged on long stems, each, say, from 1 foot to 2 feet long, absorb so much of the moisture from the stems when cut that the leaves quickly become limp. To obviate this defect, the executive allowed exhibitors to arrange foliage with their blooms from other Chrysanthemum plants. Exhibitors strip the hole of the leaves from the stems bearing the blooms and tie the stem to another carrying the leaves; thus the blooms and foliage remain fresh a considerable time. All the exhibitors, however, do not need to make use of added foliage, as the first prize collection was staged with the foliage and stems as grown.

Eleven entries were received, but two failed to put in an appearance. However, the nine competing made the finest display of its kind ever seen. The first prize blooms from Mr. Haggart,

Moor Park Gardens, Ludlow, were without a doubt the finest Japanese specimens seen this year at any show. They appeared to be timed to a day, were of large size without being unduly coarse, the colours bright, and the whole beautifully staged. Every bloom could be examined with ease; not one was crowded. The stems showed about 15 inches of foliage above the vases. The tables were so arranged as to take two rows of vases. These being placed anglewise, examination could be effected easily and without injury to the blooms.

Without a doubt the classes for Chrysanthemums in vases, of which there were several, created infinitely more interest than those in which the blooms were arranged on the ordinary boards or stands, cut with short stalks and set up by the aid of cups and tubes. One exhibitor mixed incurved blooms along with Japanese in the large Jubilee class. Comparison of the two sections for decorative effect was here easily made. It was plain that incurved blooms do not lend themselves to this purpose nearly so well as the less formal Japanese. The bruised condition of some of the blooms, too, proved that they are not so easy to carry to a show on long stems as are the Japanese.

Prizes were also offered for what are here termed "decorative" varieties. The stipulation was that they were not to be disbudded, and to be shown with their own foliage. Although there were several competitors, the blooms lacked quality, and except in but one instance the colours were not of the best. Taken as a whole, the classes noted at this show were a distinct break away from the ordinary method of staging Chrysanthemum blooms.

E. MOLYNEUX.

**Chrysanthemums G. J. Warren and Mrs. W. Mease.**—"H." (p. 438), draws attention to these two sports from Mme. Carnot. Certainly that known as Mrs. W. Mease is paler than the golden-yellow sport G. J. Warren. They are as distinct as possible. Both are of the finest form, as might have been expected from such a parent.

I look upon Mrs. W. Mease as the finest introduction of the current season. No doubt, as "H." says, the stock was over-propagated last spring to admit of the plants giving anything like satisfaction the first year. We shall expect to see good blooms in quantity next year.—E. M.

**The old purple Chrysanthemum.**—If "A. D." could secure some blooms of what he thinks may prove to be the old purple variety, the first of all the large-flowering Chrysanthemums grown in Europe, I do not think there would be much difficulty in definitely pronouncing its genuineness. All the Chinese Chrysanthemums imported from the Far East a century ago or thereabouts were very fully and carefully described, and so when the old tasselled lilac was discovered in a Cornish garden a few years since, we were enabled, by reference to the descriptions and a comparison of the blooms submitted, to say that it was the variety it purported to be. Another old-time favourite, Mme. Poggi, was also soon afterwards discovered, but this unfortunately turned out to be wrongly named, and was no other than King of the Crimson, a variety that was lost for many years. The Christines are very old, as "A. D." says. The pink or peach form is believed to have been raised by Captain Bernet, who first raised seedlings about 1827. Golden Christine was a sport obtained by Mr. Merry in the days of the old Stoke Newington Society, and the white form also known as Mrs. Forsyth came later.—C. H. P.

**Reflexed Chrysanthemums.**—I quite agree with "D. B." (p. 436) when he says there is an apparent decline in the popularity of this section of the Chrysanthemum. I cannot agree with him, however, when he makes the sweeping assertion that "there are never more than two competitors for the three prizes offered." He evidently is referring solely to the shows of the National Chrysanthemum Society. The scarcity of blooms may be true in that case, but I think it hardly right to brand all societies with failing to obtain more than a couple of entries in the class. At Hull several grand exhibits were staged, and as the blooms in all the stands were first-class an interesting display was the result. In the neighbourhood of Asect and Windsor, reflexed varieties are especially well cultivated. For years special encourage-

ment has been given to this section at Ascot in the shape of a silver challenge cup, and which has had the desired effect in stimulating competition. Most of the reflexed varieties do not lend themselves to decorative effect, mainly owing to their stiff and formal appearance, and also to the weakness of their peduncles. Artificial supports are objectionable to flowers employed for the filling of vases in rooms, not only on account of the unsightliness, but for the extra time involved in providing such. Some few varieties, however, are specially adapted to decoration, either in a cut state or when growing on the plants by reason of their free-flowering, colour, and general usefulness. Elsie, primrose, one of the best in every respect; Mrs. Home, pale yellow, a sport from the incurved variety George Glenny, which in itself is remarkable, as there are so few instances of one variety sporting to a distinct type of bloom; Cloth of Gold, bright yellow, another worthy of attention; Cullingfordi, too well known to need any praise, and King of Crimsons, as its name implies, are desirable. Progne with its violet perfume, as well as the stocky-growing, late-flowering old variety Julie Lagravere; Emperor of China with its silvery-pink blossoms; Chevalier Damage, orange-yellow, and the brightly coloured Putney George, all make up a creditable display if the plants are well grown.—E. M.

#### POMPON CHRYSANTHEMUMS.

For some time past there has been cause for regret that the useful and pretty little blossoms of the pompon Chrysanthemum have not received a larger share of attention. The greater variety both in form and colour, as represented in the Japanese and other large-flowered Chrysanthemums, doubtless has contributed very much to their popularity.

In looking through a number of lists of prizes offered by different societies throughout the United Kingdom, one may trace a cause of their discouragement. In most schedules of prizes it appears to be the rule to have just one class in which these charming little flowers are asked for. Often, too, the prizes are most inadequate, and quite out of proportion with the money offered for other types of the flower. The primary object of most Chrysanthemum societies is to encourage the cultivation of the different forms of the flower, but those responsible for their existence evidently think that flowers of large size have such an overwhelming claim, that the pompon has come to be almost excluded from their exhibitions. One class very often has to suffice for their proper representation, and in such a class both pompons and Anemone pompons are set up together. This is most unsatisfactory. One exhibitor may stage all true pompons, another Anemone pompons, while a third may show a proportion of each kind. Can a satisfactory judgment be given in such instances? The relative merits of the three boards of blooms would be anything but an easy matter to determine, thus showing the need of each type of the pompon being represented in a class by itself. The National Chrysanthemum Society certainly provides classes for pompons at its first three exhibitions, and on the occasion of its November display in the open classes, is generous enough to offer prizes for twelve trebles of pompons, and an equal number of Anemone pompons, in two distinct competitions. Smaller classes in the amateurs' division, also those open to maiden growers, show an improvement upon what existed a few years ago. Still this is a poor representation when one considers their value and the somewhat monotonous repetition of Japanese blooms at the same show. The very formal and stiff manner in which the blooms are arranged in threes and set up with such rigid uniformity—the blooms, too, often like small flowers of varieties belonging to the large-flowered sections, through a severe system of disbudding—represent the pompon in anything but a pleasing form. The beauty and usefulness of the pompons might be much better represented in classes where sprays, only partially disbudded, could be ex-

hibited in small vases, or small earthenware or glass receptacles. Half a dozen sprays neatly and lightly arranged in this way with their own foliage, and the vases given sufficient space to set off the arrangement, would make a far prettier exhibit than the formal system now generally practised. Here and there in different parts of the country a society has made this departure from the orthodox method of staging, with the result that the culture of the pompons has been encouraged. An object-lesson has in this way been given as to the decorative value of these small flowers when grown in a free manner, and with little, if any, disbudding.

By all means let the pompons be exhibited in a way that high quality may be represented, such as is now the case, but let them be set up differently, and, unless a better method can be proposed, it would be wiser to follow on the lines suggested for those exhibited in sprays. At the present time there is room for a class in which the free-flowering and useful qualities of the very small blooms, as represented by such sorts as Snowdrop, Victorine, Marion, Lune Fleurie, and Yellow Gem could be exhibited. These sorts are not large enough to be put into competition with those which now find favour, and consequently are never seen except at the display of a trade specialist, or in the collection of an enthusiast. For arranging in a fairly large vase, and cut with long stems, sprays of these miniature sorts make a very charming and welcome change. Those responsible for the arrangement of a Chrysanthemum show would find it worth their while to give a fuller consideration to the claims of the pompon flowers, which may by a judicious arrangement of classes be calculated to quite alter the appearance of an exhibition, and make such far prettier and more interesting than it would otherwise be without them. C. A. H.

#### ORCHIDS.

##### CATASETUMS.

THERE are several beautiful Orchids in this genus, the flowers partaking largely of the characters that have made the family so popular—that is, quaintness of form and structure with a delicate texture and handsome appearance. The genus is peculiar to Tropical America, many of the kinds occurring in Brazil, and although many are easily enough grown, they require care to ensure freedom of flowering and a long life under cultivation. Some of the larger growing kinds, such as *C. macrocarpum* or the nearly allied *C. tridentatum*, need only to be placed in a warm house and they will grow like weeds, but more trouble has to be taken with the smaller growers generally. All may be grown in a hot, moist house where the sun is allowed to enter rather freely until nearly mid-day, and the blinds are only used when it is absolutely necessary to prevent injury to the foliage. The heat must be allowed to rise gradually in the mornings with air on, so that the leaves do not get hot all at once, plenty of moisture being ensured by plentifully sprinkling the stages and paths. When the foliage gets warm, lower the blinds, but as early as possible in the afternoon, or say about 3 o'clock for span-roofed houses running north and south, take off all the air and syringe the plants somewhat heavily, damping every part of the house and roll up the shading. This creates a very quick, stimulating temperature, and growth under these conditions will be very rapid. As the growths get ripened a little more sun may be allowed, but the temperature must be steadied a little by more air and less atmospheric moisture. Keep the roof moisture going until the pseudo-bulbs have quite finished swelling, as any slackening at this time leads to shrivelling in the winter and consequently

weak growths in spring. In many cases the leaves will begin to turn colour soon afterwards, and then the water supply may be greatly reduced, the plants hung up or arranged on the stages in the full sun and the temperature sensibly diminished. Any that are pushing their flower-spikes may with advantage have a little more encouragement. During winter hardly any water need be given, especially to well-ripened plants, but the pseudo-bulbs must not be allowed to shrivel. Too little heat is not advisable, a night temperature of 60° while at rest being quite low enough, though a slight drop on cold nights is preferable to pushing the fires and causing a stuffy atmosphere. In early spring when the young growths are starting it is important that water be carefully applied and kept away from these tender shoots as much as possible. Even when further advanced, unless the weather is really bright, syringing must be very carefully gone about, as the water sometimes collects in the heart of the shoots, to their detriment. There is no doubt that when the sun is shining on them on hot summer afternoons a thorough washing with tepid water from the syringe is very refreshing and of immense benefit to the plants.

The treatment of the roots depends considerably upon the habit of the species, the weaker growers of course needing less in the way of compost than the larger. Three parts of good fibrous peat to one of Sphagnum Moss may be given, and where pots over 4 inches across are used, a free addition of clean crocks and charcoal broken in rough lumps should be made. For the smaller sizes it will be found more convenient to mix the peat and Moss and to add a few suitable crocks as the potting proceeds. In each case let the drainage be perfect, for Catasetums abhor anything close or spongy about the roots, yet require a very liberal water supply when in full growth. The fleshy roots, too, are very easily injured by disturbance, and when the drainage is good and clear one may easily remove most of the compost and replace it with new without disturbing a single root. Before potting clear every bit of old and sour material none the less, for if this is left, the whole of the new compost soon gets into a bad state. Newly-imported plants are sometimes rather difficult to establish; they keep alive and look fairly sound, but it is often many months before either a new bit of root or growth makes its appearance. Nothing can be done to hurry them, and the best way to manage them after being thoroughly cleaned is to pot them up in clean crocks at first, surfacing these with a little Moss when the roots are well plumped up. When the growths appear, press a little compost around the plants and trim off neatly, almost entirely withholding water until the shoots begin to root. In a proper atmosphere insects usually give little trouble, but when allowed to get dry, red spider often puts in an appearance. Thrips, too, like the young shoots, and soon cripple them if allowed their own way. For the latter, use the vaporising fumigator on two consecutive nights, and sponge the plants thoroughly afterwards. Clean, soft rain-water is the best thing to use, and is preferable to any other insecticide, though in really bad cases of thrips a little tobacco-water may be used. The leaves, though hard-looking and not apt to be injured by sunlight, are, notwithstanding, easily spoiled by rubbing with an almost dry sponge, as sometimes practised by careless or ignorant cultivators.

*Lælio-Cattleya Gottoiana*.—This is undoubtedly a natural hybrid between *Cattleya*

arneri and *Lælia tenebrosa*. The sepals and petals, about 4 inches in length, are pale rose, seeming pale green at the base; the lip rich purple, margined with rose, and veined with darker purple in the centre; the side lobes rose, fading to yellow, and lined with brown at the base. It was introduced with *Lælia tenebrosa*, and first flowered in 1891 in the collection of Mr. E. Gotto, the Logs, Hampstead Heath. It was exhibited at the meeting of the Royal Horticultural Society on June 23 of that year, and has since flowered in her collections. A plant was exhibited by the late Hon. J. Chamberlain at the Drill Hall meeting of November 23 last.—H. J. C.

**Lælia peduncularis.**—A fine spike of this plant comes from a correspondent. It bears six flowers, each about 2½ inches across, of a deep lilac-se on the sepals and petals, the lip having an oblong blotch in front. It is quite distinct from the anceps section and a useful and beautiful hybrid. Keep it in a light, sunny house, giving a very free water supply while growth is active and much less while at rest. The temperature need not be so high as that of the Cattleya house and abundance of air should be given all the year round. It is a native of Mexico.

**Scuticaria Steeli.**—As a garden plant this could scarcely be worth growing, except for its distinct appearance, the flowers not being produced very freely. They are, nevertheless, very singular and beautiful, the ground of the flower being clouded white, with large chocolate blotches, the lip having purple stripes. The flowers are produced from the base of the long terete leaves, the latter often growing considerably over a yard in length. It does not require much compost, and may often be seen thriving well on almost any blocks. It likes plenty of warmth and light and a very moist atmosphere, being a native of British Guiana, whence it was introduced in 1834.

**Lælio-Cattleya Clive.**—A plant of this noble hybrid was recently exhibited at the Drill Hall under the above name from the Rt. Hon. J. Chamberlain's collection. It is the result of crossing *Lælia pumila* Dayana with *Cattleya bowiana* aurea. This was raised in the collection of Mr. N. Cookson, Oakwood, Wylam-on-Tyne. L.-C. Normani also came from the collection of Mr. Cookson, as also did L.-C. broomfieldensis (the reverse cross), exhibited by Mr. M. Wells at the Drill Hall meeting of the Royal Horticultural Society on August 14, 1894, when it was awarded F.C.C. by the Orchid committee. Previously to this Mr. C. J. Ingram had raised from the same parentage as the two first named L.-C. Ingrams, which was awarded a first-class certificate in August, 1892. This was by far the finest form of the four. This is truly an example of the plurality of names, which cannot be anything but misleading to the expert, to say nothing of those whose opportunities are less favourable. Surely the original name might be maintained, with names added where the variety deserved distinction.—ONE OF THE ORCHID COMMITTEE.

**Arpophyllum giganteum.**—It is late for this plant to be in bloom, but I recently saw a large specimen bearing quite a couple of dozen of the long, dense spikes of rosy purple flowers. The plants grow in dense tufts of upright stems, each bearing a single sword-shaped leaf, from the base of which the spikes issue. The plants are very free rooting, and consequently like a fairly substantial root-run. The drainage requires very careful attention, and in the rather deep pots that the sorts like should come at least two-thirds of the way up, covering this with a layer of rough Sphagnum. Equal parts of peat and chopped Moss with a little fibrous loam for the stronger plants suit it well for compost, and in planting place a few pieces of roughly broken crocks and charcoal along with the peat and Moss. Give a little water only until the roots begin to run freely, after which and as long as growth keeps active a full supply is needed. It is not a fastidious plant as to temperature, but being a native of some of the most exposed parts of Mexico and Guatemala, must not have too great heat.

Plenty of light is quite a necessity in its culture, so heavy shading must not be allowed at any time. It may be grown with Cattleyas if this is not lost sight of, or even with the Mexican *Lælias*. It is an old plant in cultivation, having been sent to Chiswick in 1839 by Hartweg, who discovered it growing on high trees in Mexico.—R.

#### ONCIDIUM HÆMATOCHILUM.

The blossoms of this plant are very bright, and, as long as the plants are healthy, very abundantly produced. They occur from ten to twenty or more on erect spikes, and are yellow on the sepals and petals, spotted with rich chestnut-brown, the lip bright rosy-erimson. It is not often seen in good condition, though if healthy, vigorous plants are once secured, it is not difficult to keep them so for some years at least. The plant has no pseudo-bulbs, but consists of large thick-textured leaves, each about a foot in length, from the base of which the flower-spikes proceed. It thrives well in a hot, moist house while making its growth, and should have a light sunny position not far from the roof-glass. Commencing to grow in early spring, the leaves unfold slowly, and by the autumn should be fully expanded. The flower-spikes occurring at this time, it is not wise to reduce the water supply much, but let the plants have as much air as possible, and be only sufficiently shaded to prevent injury to the foliage. The flowers over, less water is needed, for though the plant is bulbous, the large leaves store up a lot of nutriment that keeps it going through the winter with only occasional waterings. If the Moss used for compost has grown much about the base of the leaves, it is as well to remove a little of this before winter, as otherwise it is apt to hold moisture in excess of the needs of the plant. And here it may be noted that in preparing the compost for *O. hæmatochilum*, which greatly dislikes root-disturbance, it is well to use plenty of Sphagnum Moss rather than peat. Not that it is any more lasting, but decayed Moss is easier to remove than peat, and possibly by its decay furnishes a certain amount of food to the plants not obtainable from peat, which when decayed is always injurious. The plants when newly imported are very vigorous for a season or two, and this vigour must be taken advantage of to get them thoroughly established in their pots, baskets, or whatever they are grown in. Give them fairly good room and a large percentage of clean crocks in the compost, then it will be easy as time goes on to add to this without disturbance or unduly thickening it. It is not very important what class of receptacle the plants are grown in, and I have seen good pieces grown on Tree Fern stems, but careful treatment of the atmosphere, especially during winter, is necessary. A very moist atmosphere, especially should the temperature run down a little, is apt to cause an attack of spot, which renders the plants very unsightly. A warm, dry circulation of air at midday is what this *Oncidium* delights in, and has a very great deal to do with building up a solid growth that will bloom profusely in due season. It is a native of New Grenada, and was introduced in 1847.

**Masdevallia triaristella.**—The tiny flowers of this and several similar species have a great charm for those who like quaint and structurally interesting flowers. In this case the plant seldom exceeds 2 inches in height, and the flowers, with their elongated sepals and peculiar concave formation at the base, are brown and bright yellow. Being a true epiphyte, it must be grown either in very small pans or baskets, preferably suspended not far from the roof, where they have the benefit of plenty of air.

**Restrepia antennifera.**—The very singular and beautiful blossoms of this species are produced on slender spikes from the base of the leaf. The upper and lower sepals are pale yellow, the latter joined and forming a boat-shaped cavity; the petals are very narrow and slender, and all

the segments are closely covered with purple-brown blotches and spots. It is a native of New Grenada, where it was discovered many years ago by Humboldt growing at great elevations on the tree trunks. A cool, moist atmosphere and shallow root-run are therefore the most natural treatment for it.

**Lælia præstans.**—This was in capital form recently with Mr. Bull, the bright and effective blossom being very large compared with the size of the growths. Like all the *L. pumila* section, it dislikes a large body of compost and does well in small pans suspended from the roof in a warm, moist house. Fill the pans to within an inch of the rims with clean crocks, planting in peat-fibre and Sphagnum. It is not exactly constant in its time of flowering, but usually grows away in early spring, blooming in autumn upon the growth made. It must be kept moist all the year round, but not too heavily watered during the winter months.

**Oncidium pelicanum.**—This useful Mexican species is in flower with Mr. W. Bull, and is very pretty. The pseudo-bulbs are deep green, the spike rising to a considerable height and being very freely branched. The individual flowers are not large, but showy, the sepals and petals are pale yellow, blotched with reddish brown, the lip much paler in colour, with a crimson crest. It does well under ordinary conditions of culture, and should be potted up in peat-fibre and Sphagnum Moss over good drainage. It thrives well in the cooler part of the Cattleya house, and must have plenty of water at the roots while growing.

**Vanda suavis.**—There is a very fine collection of Vandas of the larger-growing section at Cambridge Lodge, and several of this fine species were recently in bloom there. The plants are large healthy specimens, many of them 2 yards in height, their long white roots spreading in every direction, catching hold of each other's pots and running over the stage. It is just this freedom both of root and branch that I have so often advised for these beautiful plants, and they are well worthy of it. Cooped up in small houses with their heads close to the glass, they are quickly covered with insects and unsatisfactory in every way, but treated as indicated they are noble objects.—H.

**Miltonia Moreliana atropurpurea.**—This is one of the brightest and deepest tinted of all the spectabilis group, and this, too, was recently good at Chelsea. The sepals and petals are a deep rich vinous purple, the lip having many radiating lines of rose on a light ground. It does well on rafts or in shallow wood baskets with only an inch or so of compost. It likes a good clear light, but must not be exposed to bright sunshine, and the temperature of the Cattleya house suits it well. During the time growth is active it can hardly be over-watered, and even when at rest the roots must never be kept dry for long together.

**Masdevallia macrura.**—This is one of the largest growing of Masdevallias, and produces very fine flowers. They are freely produced and singular in outline, the sepals being elongated into tails nearly 6 inches in length beyond the tubular portion. The colour is a tawny yellow inside, the outer part brown, and the whole of the tube is closely covered with minute purple dots. It is one of the best growers and thrives well in rather larger pots than the Harryana section. The credit of its discovery is due to Roehl, who found it growing on Moss-covered rocks in New Grenada. It was not until some years later, however, that it was introduced to cultivation, Mr. Bull's collectors sending it home in 1876.

**Oncidium varicosum.**—This mid-winter-flowering *Oncidium* is largely grown in Mr. Cypher's nursery at Cheltenham; many of the spikes are 3 feet in length, and bear from fifty to sixty flowers. These are very large individually, of the brightest yellow, with a distinct brown centre. It is a cool Orchid and of a free habit of growth. It ought to be grown largely

by all in need of flowers of the kind at this season. I know many amateurs are afraid to buy Orchids, as they think they would not grow unless under special care and conditions, which is no doubt the case with many of them, but this *Oncidium* proves itself to be a noteworthy exception.—M.

#### SHORT NOTES.—ORCHIDS.

**Cypripedium Deedmani.**—This distinct hybrid is the result of a cross between *C. Spicerianum* and *C. Chamberlainianum*. The dorsal sepal is white at the top, green, spotted with purple at the base, and having the broad characteristic band of purple seen in all *C. Spicerianum* hybrids. The petals are green, thickly spotted and lined with brown, the lower sepal pale green, the lip rich rose-purple, shading to green. It was raised in the Botanic Gardens at Birmingham, where it has recently flowered.—H. J. C.

**Lælio-Cattleya albanensis** (*L. grandis* × *C. Warneri*).—This is a lovely free-flowering and distinct hybrid. The sepals and petals are delicate rose, of fine form and substance; the lip rich crimson-purple, margined with rose; the side lobes rose, becoming suffused with the rich purple at the base. A plant with three flowers was recently shown at the Drill Hall from the Highbury collection of the Rt. Hon. J. Chamberlain. This is a natural hybrid and was introduced by Messrs. F. Sander and Co., of St. Albans, in 1893.

#### BOOKS.

##### PRACTICAL FORESTRY.\*

SINCE the first edition of this work was issued, the subject of forestry, we are told, "has made no great advance." To read the book, one might imagine that between Curtis the first and Curtis the second nothing whatever had been done except what he has done himself in conjunction with the "Land Agents' Record." Although Schlich, Fisher, Marshall, and a completely revised and reversed edition of Brown's "Forester" have appeared in the interval, and quite a revolution been inaugurated in forestry teaching, not to speak of the forestry press, which has done and is doing so much, the author ignores them all, or else he has never heard of them. In a book manifestly derived from common sources, not a word of acknowledgment is to be found, so far as we can see. One might well rise from a perusal of "Practical Forestry" in the belief that its author was an arboricultural Rip van Winkle who had been asleep for years. Much of the advice given is old, and has been condemned by all acknowledged teachers of the present day. He states (page 12) that in a long experience at home and abroad he "has seldom seen that display of knowledge and system that we all desire to see." Mark the "all." No writer would venture to put his name to such a statement who knew really anything about forestry abroad, especially in Germany and France. Strong doubts as to his expert abilities are engendered by his undisguised bid to landowners to treat over the heads of their competent head foresters. Here is a sample of the author's simplicity and vague knowledge of his subject: "Some trees require more room than others—for example, Oaks, because it is important they should attain a large girth with a medium height" (pages 55 and 56). What consumer, I wonder, ever objected to an Oak because it was long in the bole. The longer the bole the greater the value, while a short bole means a useless top and loss to the producer. How a Schlich or a Dr. Sommerville must grin to see it advised that in rearing hardwoods (page 59), "the distance between the trees may range from 12 feet to 20 feet," that is, 4 yards to nearly 7 yards apart. In such a case our expert "would make up with conifers 4 feet apart"—"nurses," I presume, some half dozen or more profitless nurses to each hardwood. No particular conifers are preferred, and with most varieties

the probable effect would be the smothering of the Oaks. On thinning he is apparently quite oblivious to advanced opinion and practice. At page 72 he proceeds: "Trees when growing need air and light and ample room below, otherwise they crush out one another and the strongest and fittest only survive." Exactly. . . . "Where from the earliest period careful thinning has been carried out, very different results are manifest. Each tree stands firm and independent of its fellow, the lateral branches are retained until they have performed their functions and do not wind-whip each other, but give support without dependence; the growth is rapid and uniform, and the trees being of equal height obtain their full share of light and heat. . . . There is at once the appearance of prosperous development, which to the landowner is an accumulation of capital or a silent influx of revenue." This is Brown at his worst. The worst season in the whole year is recommended for planting (page 41), viz., to begin with November and end with April, and the vile "notching system" of planting is advocated energetically. At page 53 we are told to bear in mind that the life of a tree depends on the vitality of its root fibres, and that everything should be done that skill can devise to keep them healthy and active, and the author's way of doing this is to transplant throughout the dead season of the year, when the chance of the mutilated roots keeping "healthy and active" is reduced to the vanishing point. No distinction is made as to species; evergreens and deciduous all go in pell-mell together. At the same page it is also interesting to learn that on large areas small trees "should not need staking." Biggish trees would, we presume, have to be staked. Now, what practical joker could have suggested staking young plantations, under any circumstances, to an expert who is great on economy by planting thin? At page 60 the author appears to have got a momentary inspiration from some source of the newer forestry, and introduces in italics the words "unbroken leaf canopy." Quite forgetting his earlier thinning operations, in which his trees stand sturdily aloof from each other, with no canopy whatever, he writes, speaking of Nature, "Throughout the future the forester should endeavour to obtain an unbroken leaf canopy. . . . True forestry greatly consists of this uniform and regular growth, this mutual dependence on each other for support." How an unbroken leaf canopy is to be maintained throughout without the "wind-whipping" spoken of is a puzzle.

The book does not appear to be what it pretends to be—a safe book for those for whom it is written. It does not display personal familiarity with forestry operations, and it is by no means up to date. I have rarely read a book so pretentiously written, and yet so poor or conceived in such bad taste. W.

##### MODERN CHRYSANTHEMUM CULTURE FOR THE MILLION.\*

THIS is another recent addition to the rapidly increasing literature of a popular flower. It is a very neatly got up little sixpenny paper-covered cultural manual of sixty odd pages, well printed and containing about a dozen typical and explanatory illustrations in black and white. The chapters are in most cases brief, but to the point, and, considering the price, "Modern Chrysanthemum Culture" is one of those little books that neither author nor printer need feel any compunction in submitting to the public estimation.

The subjects dealt with are many, and may be summarised under the following headings: Propagation, the various pottings, summer treatment, insects and mildew, feeding, top-dressing, taking the bud, housing, damping, dressing, staging, judging and other allied subjects.

In a table of Chrysanthemums the author gives

\* "Modern Chrysanthemum Culture for the Million." By George Garner. (Blake and Mackenzie, Liverpool.)

what may be very useful to many who are desirous of growing for show. This table comprises a selection of some of the best varieties, and gives an indication of height, season, size of pot required, the proper bud to be taken and the date, when to house the variety and the size of bloom. These details in their fullest form apply principally to Japanese and incurved, but other selections in all the sections are given without perhaps being quite so comprehensive.

Mr. Garner's treatise is handy and portable, and we do not remember any other that can be compared with it at the price, and its style should ensure it a ready sale.

#### JADOO.

I HAVE been experimenting this season with jadoo, a soil prepared from soot, peat, gypsum and a few other ingredients. When sowing my spring Onions I drilled in with the seed in each row a layer of fine jadoo about half an inch thick. I did the same when sowing Cabbages, autumn Onions and other seeds, including Asparagus. My plants came up so thickly and regularly, that I came to the conclusion that not too much was claimed for jadoo in this respect and that all my seeds germinated. Next year my sowings will be much thinner. As regards pot plants, I had very few plants in pots, but I repotted four plants in my windows, a Palm, a Vallota and two Asparagus nanus, in the spring that were in bad health. The Vallota was almost dead; it has now made a bulb half an inch in diameter and is looking vigorous. The Palm has put forth three fresh leaves, and the Asparagus has rooted well and grown vigorously. In all, the root action has greatly developed, and I have found the statement as to watering but seldom absolutely correct; the danger rather is that one may give too much water. As to cuttings, I cannot speak from my own experience. I planted a number of Lilies, some in a frame where jadoo had been largely introduced and others in the open air with jadoo round their roots. In all cases the bulbs had thriven better than in former years in the ground, had made better growth, and had developed much greater root action. Amongst the Lilies were *L. Krameri*, *L. odorum*, *L. Henryi*, some *speciosum* and others. My Gladioli were treated in the same way. When planted in the spring, a layer of jadoo was placed about them. I have not yet lifted them, but they have done well, and especially the little bulbs and bulbets. During the autumn I paid a visit to Teignmouth, where Col. Hallford Thompson resides. I saw in his conservatory a fine lot of Begonias, Cannas, Lilies, &c., all growing in jadoo and in fine condition. The blooms were very highly coloured and very abundant. I saw a plant of *Tacsonia Van Volxemi* whose roots were radiating in all directions in a small brick pit inside one of the houses. The jadoo in the pit was simply one mass of roots, the plant in fine condition. In another house I saw a small Coffee plant in perfect health and foliage. This plant had come to him three years back much diseased with the fungus that had done so much harm in Ceylon. Grown in jadoo the fungus has disappeared and the plant had regained perfect health. In 6-inch pots were some *Lilium Harrisii* that had bloomed well two years running. One of these bulbs was turned out sound and firm; it had made good growth, had borne five flowers, with stems 2 feet 3 inches high and had a fine bulb 9 inches in circumference. Potted again in jadoo, I have no doubt it will flourish equally well next spring. I admired the healthy, robust look of his dwarf Apple and Pear trees growing in pots in jadoo and covered with fine fruit. What I saw convinced me that jadoo put beneath the surface and round the plants encouraged root action and greater luxuriance of growth and power of flowering. I much admired a bed of Violets in great round clumps 8 inches to 10 inches through; they looked like a bed of Strawberry plants.

ALEXANDER WALLACE, *Physician*.

\* "Practical Forestry." By Chas. E. Curtis, F.S.I., Professor of Forestry. London: Crosby, Lockwood, and Son.

## THE BAMBOO GARDEN AT KEW.

THE Bamboo garden formed a few years ago at Kew has proved so well adapted for the plants, that a few notes as to its position, soil, &c., may be of value to the numerous readers who intend to, or have already commenced, to grow the Bamboos. A very short experience in the cultivation of Bamboos is sufficient to demonstrate the importance of shelter as a means to success. It is, possibly, the factor of chief importance. Recognising this, the director of Kew selected a position in the middle of a wood near the Rhododendron dell, and taking advantage of a hollow already existing there, had the ground lowered some 5 feet or 6 feet below the surrounding level. A belt of shrubs on the north and east sides, between the trees and the Bamboos, together with the low level on which the latter stand, affords them a shelter almost as perfect as can be furnished out of doors. Even the bitterest north-easter loses a good deal of its sting before it reaches these Bamboos. It has been pointed out before in these columns that what the cultivator of Bamboos has most to fear is not a low temperature

growth is indicated by the unrolling of the young leaves, which may be in April or May, according to the mildness or otherwise of the winter. Bamboos are very difficult to kill outright, but treated improperly they are apt to get into a stunted, one might term it sulky, condition, which it takes them a long time to recover from. I would advise those who wish to try these plants to obtain them from the nurserymen in autumn or winter, if they have been grown in pots, and to give them greenhouse treatment till the end of May, when they can be planted out in a growing state; but, on the other hand, if they have been planted out in the nursery ground, not to have them sent off till the end of April or later, when they can be set out at once. A yearly clearing out of the older, worn-out stems, dead leaves, &c., prevents that choked-up appearance one sees so often in ill-tended Bamboos, and whilst giving a lighter and more graceful aspect to the plants allows freer play to the young growths. It should be done in spring before the latter have grown long enough to risk injury.

Such, briefly, has been the system of cultiva-

days are at their shortest and darkest, there is nothing out of doors that equals the best Bamboos in the fresh greenness and beauty of their foliage. The following is an extract from Mr. Freeman-Mitford's book, "The Bamboo Garden," p. 209. It refers to some sheltered corner at Batsford Park, where Bamboos play no inconspicuous part, and it has a special interest at this season:

A tiny rill trickles over the green velvet of the rocks, with Ferns peeping out of crannies in which many an alpine treasure is hushed to rest, waiting the warm kiss of spring and the song of the birds, that, like Orpheus with his lute, shall raise the seeming dead from the grave. Tall Rushes and gracefully arching Bamboos, hardly stirred by the wind, nod their plumes over the little stream from which the rays of a December sun have just strength to charm the diamonds and rubies and sapphires; a golden pheasant, all unconscious of a human presence, is preening his radiant feathers by the water-side. It is a retreat such as the fairies might haunt, and where in the bitter Christmastide a man may forget the outside world, and for one too brief hour revel in a midwinter day's dream of glorious summer.

W. J. BEAN.

## NOVEMBER IN SOUTH DEVON.

DURING the past month 1.25 inches of rain fell on twelve days against 0.84 of an inch on six days in November, 1896, the average for the month being 4.04 inches. For the first eleven months of the present year the rainfall has amounted to 29.12 inches with 146 rainy days, against 19.45 inches on 135 days during the same period of 1896, so that the year's rainfall up to the present time exceeds that of the corresponding period of 1896 by nearly 10 inches. It is, however, almost 2 inches below the average fall for the eleven months, which is 31.02 inches, and as there is no probability of such a heavy rainfall during the present month as occurred during December, 1896, when 7.37 inches fell, the year will doubtless close with a rainfall slightly below the average. The temperature of the month has been high, the mean of highest and lowest temperatures being 49.4°, or over 2° above the average, which is 47.1° and more than 7° higher than the mean of November, 1896, which was 42.8°. Both October and November have been unusually warm, their mean temperature being 6.8° above the mean of the corresponding months in 1896. The highest screen reading was 60.3° on the 18th, and the lowest 34.0° on the 30th. The highest sun temperature was 95.4° on 18th, and the lowest grass reading 30.9° on the 30th. This is the first occasion since the preceding winter on which the grass thermometer has registered frost, whereas on December 1, 1896, the mercury on the grass had already recorded frost on twenty-three occasions. The month has been phenomenally sunless, the sun having shone for only 33 hours 55 minutes against 83 hours 20 minutes in November, 1896, and an average of 64 hours 5 minutes. What we have gained in warmth we have lost in brightness, for the dulness of October and November has thrown us back in our sunshine record, and from being 20 hours above the average on October 1, we are, on December 1, over 30 hours below. For the past eleven months the sun has shone for 1627 hours 15 minutes, the average being 1659 hours 10 minutes, and the record for the same period of 1896, 1672 hours 25 minutes. The total horizontal movement of the wind has been 6621 miles, that for November, 1896, having been 6316 miles. The greatest daily speed was 55.4 miles on the 27th, an average for the twenty-four hours of 23 miles an hour, and the highest hourly velocity of 34 miles was reached between the hours of 6 and 7 a.m. on the same date. The past month is remarkable from the fact that the highest and lowest barometrical readings of the year occurred during its course. On November 21 the highest reading, 30.7, was recorded, and on the 30th the lowest of 29.5.



In the Bamboo garden at Kew. Engraved for THE GARDEN from a photograph by Mr. J. Gregory, Croydon.

merely—most of the Bamboos will stand 20° or 25° of frost with impunity in a still atmosphere—but the dry, biting winds of spring. The first requisite, therefore, at any rate where the climatic conditions are on a par with those at Kew, is shelter from north and east.

With regard to soil, I should say that Bamboos like best a free, open, sandy loam. The greater part of the soil at Kew is poor and sandy, but there is, in one part, a belt of good stiff loam extending for a few hundred yards, and it is on the border of this that the Bamboo garden is situated. At the commencement the ground was trenched to a depth of 2 feet to 3 feet, and during the process was enriched with leaf-soil, and where necessary lightened with sandier soil. Another point to remember is that these plants can scarcely be over-fed, and in well-drained soil can scarcely be over-watered. An annual mulching with rich manure is of the greatest advantage.

In regard to transplanting, it is important to note that disturbance at the root is most harmful during autumn and winter, and that it is safest to defer this till root-action has commenced in spring. The renewal of

tion pursued at Kew. That it is the right one is shown by the luxuriant growth of almost all the kinds—so luxuriant, indeed, as to be rather embarrassing in the somewhat restricted space occupied by the collection. The Bamboo garden was made in 1892, and the following are the lengths of a few of this year's growths, exceeded, of course, by specimens in older collections and in warmer parts of the country, but of some interest, perhaps, as showing the rate of growth of Bamboos in a district which has not proved particularly favourable to the growth of tender shrubs as a rule: *Arundinaria Simoni*, 17 feet; *Phyllostachys viridi-glaucescens*, 17 feet; *P. Henonis*, 15 feet; *Arundinaria nitida*, 13 feet; *A. japonica*, 12 feet; *Phyllostachys aurea*, 12 feet; *P. nigra*, 12 feet; *P. fastuosa*, 11 feet 6 inches; *Arundinaria Hindi*, 11 feet 6 inches; *Phyllostachys Boryana*, 9 feet; *P. Castillonis*, 8 feet 6 inches; *Arundinaria anceps*, 7 feet 3 inches; *A. tessellata*, 4 feet 6 inches; *A. Fortunei* (variegated), 4 feet.

Bamboos are not all of equal merit, but some of them are the most beautiful of evergreens. Just now when Christmas is at hand, and the

In the garden the unusual warmth of the month and its freedom from frost until its concluding night have favoured the close of the season of the open-air flowering plants. Rarely have Chrysanthemums made a finer display, for their blooms have been marred neither by rain nor frost, and it is wonderful, under such conditions, for how long a while they remain in beauty. Plants of the early-flowering Mme. Desgrange and G. Wernig I noticed still ornamental in November, while Lady Selborne, whose loose, flimsy petals are the first to be injured by wind and weather, enjoyed an unusually protracted season of immunity. Of white Chrysanthemums, both for culture under glass and in the open, the new Niveum appears to hold the palm. Its reflexed flowers are large, symmetrical, and show no eye, although grown as bush plants in the open. Even the cheek inseparable from lifting the plants from the open ground and replanting under glass just as the flowers are opening seems to have no detrimental effect on quantity or quality of bloom. This year, both this and other varieties are decidedly earlier than in 1896, the majority of blooms of Niveum being past their best fully three weeks earlier than was the case last year. Other good whites that have done well in the open are the two old favourites Elaine and Mlle. Lacroix. The wonderfully open weather has made the culture of these under glass, for marketing purposes, quite profitless, as with such wealth of blossom on outdoor Chrysanthemums and Dahlias the supply in most cases exceeded the demand, and the glass-sheltered blooms rarely did more than pay their carriage to market, in many instances, indeed, failing to effect this. The sulphur-white Elsie makes a good garden plant, and Mrs. J. S. Fogg is an effective yellow, but the sturdy W. H. Lincoln, which has been so satisfactory for several seasons past, appears in a portion of the south-west district to have lost its constitution, as this year it has lost almost all its foliage and has produced but few blooms, although other varieties grown under precisely similar conditions have been pictures of health and freely flowered. Peter the Great is a light yellow that flowers abundantly and is well adapted for open-air culture, while Jardin des Plantes is always valuable from its peculiarly rich golden tint. The new Modesto, an excellent exhibition bloom, also possesses the same striking colouring, but whether it will succeed as a garden variety can scarcely be determined for a season or two. The semi-double yellow, Admiral Sir T. Symonds, has been very beautiful in the garden during the past month, its colour being this year free from the deep bronze tint that suffused its petals in 1896. The appearance of this ruddy colouring in 1896 on plants raised from cuttings taken from subjects bearing clear-coloured flowers, and the production this year by all the plants of clear-petalled blooms, though all were raised from plants bearing bronzed flowers in 1896, is difficult of explanation, especially as the treatment has been identical in each year. The single white, Mary Anderson, makes a pretty bush plant, and the ruddy gold of Source d'Or is most ornamental, while of darker colours, Tokio, Cullingfordi, and the beautiful small-flowered Julie Lagravère, a very ancient introduction as Chrysanthemums go, can scarcely be beaten for outdoor effect.

Dahlias bloomed continuously throughout the month, though the blossoms of the scarlets and crimsons, perhaps, lacked something of their early autumnal brilliance; still, a bright gathering could have been made up till the last day of November, when the first frost put an end to their display. In "E. H. W.'s" delightful "Trip to Fairyland" (p. 389) he mentions the devastation wrought by frost weeks ago among the Dahlias in northern lands. Well, at all events there are spots in England where King Frost did not commence his rule at such an early date, the sea-board of South Devon, for example. Cannas bloomed well into November, and before the end of the month some of the single Poppy Anemones had opened their blossoms, while late-sown seedlings of Sweet Alyssum were in bloom, and

here and there a spire of bloom showed on the Antirrhinums. Aster grandiflorus was at its best at the commencement of the month, its large purple-gold-centred blossoms making an attractive spot of deep colour in the garden. The giant Christmas Rose (*Helleborus altifolius*) appears in its loveliest guise in November, and yields its chaste cupped blossoms in profusion. Gazing at their purity, one recalls the legend of the little shepherd-maiden of Bethlehem, who, when the wise men from the East brought their rich treasures to the infant Christ, stood without, weeping, in that she had no gift to offer. As she wept the Angel Gabriel appeared before her and asked her why she sorrowed. "I am so poor that I can bring no gift," she answered. The angel, bending, struck the bare earth with his wand, and there before her bloomed the white flowers of the Christmas Rose. "Gather them, little maid, and bear them in," the angel said, "pure blossoms, emblem of a love as pure." So mild has been the season, that the Lenten Roses commenced to bloom before the end of the month, at the commencement of which *Coreopsis grandiflora* was still in blossom. Many annuals have been in flower during November — blue Cornflower, *Eschscholtzia*, Mignonette, Marigolds, blue Lobelias, *Salpiglossis*, Sweet Sultan, Stocks, and Sweet Peas, while now and again in the hedge-rows a scant gathering of pale Primroses was to be found. A few great golden stars of *Doronicum plantagineum excelsum* Harpur - Crewe glowed from time to time in the herbaceous border, while *Erigeron speciosus* and *E. muconatus* were both in flower in November. *Fuchsia Riccartoni* was crimson with flower at the commencement of the month, when many late spires of the Cape Hyacinth (*Galtonia candicans*) held aloft their ivory bells. In the rock garden the deep blue *Gentianella* flowered sparsely, and *Geranium sanguineum* bore many bright blooms, while a delicate blossom was now and again to be found on *G. striatum*. *Gaillardia grandiflora* produced a few late blossoms in the early part of November, as did *Hypericum Moserianum*, and the *Heliotrope* still flowered in sheltered spots. The lovely *Iris stylosa* gave many a gathering of its scented lilac-blue blossoms, which when cut ere they are fully expanded last well in water, and are invaluable at this time of the year for indoor decoration. The Paris Daisies, both yellow and white, though not so free-flowering as earlier in the year, kept in bloom, and a few Pentstemons remained in flower. The Winter Cherry (*Physalis Alkekengi*) was a brilliant object with its strings of bright orange calyces ere cut for winter decoration, for which its more graceful growth renders it of greater value than the new *Physalis Franchetti*. That the Oriental Poppies had not quite composed themselves for their winter's rest was shown by the appearance of a giant belated blossom here and there. The white Macartney Rose opened a few blooms during the first week of the month, and a few Tea Roses could be gathered from wall plants, Safrano being especially noteworthy in this respect. In gardens where the soil is not heavy and damp the Winter Flag (*Schizostylis coccinea*) bore its crimson flower-spikes, and an occasional light blue blossom opened on *Scabiosa caucasica*. *Stokesia cyanea* expanded a few purple flowers in November, and on southern rocks a tint of red evidenced a flowering remnant of *Valerian* (*Centranthus ruber*). *Vinca* minor and its double variety, the flower of the latter almost resembling a Marie Louise Violet, showed infrequent blossoms amid their shining leaves, and during the earlier weeks of the month the Violets bloomed profusely, becoming rarer, however, towards November's close.

Against a sheltered wall *Abutilon vexillarium* remained in bloom, not having been flowerless since June. The white and red *Lapageria* blossoms still hung on a northern wall, and the *Habrothamnus* still produced its red flower-clusters. The Winter Jasmine (*Jasminum nudiflorum*) is covered with its blossoms of bright gold, its brilliant effect being heightened when it is associated with *Cotoneaster microphylla*, now

crimson with its myriad berries. Many a wall is now brightened with the orange fruits of *Passiflora coerulea*, which hang like countless lamps among the dark foliage. *Solanum jasminoides* remained in bloom throughout the entire month, though the number of its flower-clusters and the size of the individual blossoms show some diminution. This is *par excellence* the flowering climber of the south-west, commencing as it does its blooming season in June and remaining in blossom till mid-December should the weather continue open. *Colletia cruciata* I saw the other day in profuse bloom, and on the banks of the Dart Correas were in flower early in the month. *Choisya ternata* has been in many instances a November flowerer and the Winter Sweet (*Chimonanthus fragrans*) has expanded the first of its sweetly-scented blooms. Shrubby Veronicas and the *Laurustinus* have also added their quota to flowers of the month. After a protracted season of blossoming the last white chalice was cut from the standard *Magnolia grandiflora* on the 15th, the first having been gathered on June 22, during the interval between which dates some hundreds of ivory-white blossoms have been produced. S. W. F.

### THE AUTUMN.

This has been a wonderful autumn indeed. I say has been, but really, judging from the present state of things generally outdoors, autumn can hardly be said to have passed away yet. There are, so far, few indications of the near approach of winter. The last two months have been exceptionally dry and mild. No touch of frost has as yet been felt here. On Thursday, the 18th inst., at 7 a.m., the thrushes were singing as on an April morning, and one was almost tempted to believe that, after all, the calendar must be wrong, and that a peep out of the window would reveal hedges and trees aburst with green. Starlings, perched on the chimney-pots, were whistling joyously and preening their feathers, which just caught the glint of the rising sun, and shone a metallic burnished green. At 10 o'clock the sun burst forth with an almost summer-like power. The yellow Jasmine in full bloom attracted the honey bees, which were out in numbers, together with a few of their larger relatives, the "bumbles." The Ivy blossom is yet fragrant in places, and, like the creamy bloom-heads of the *Aralia*, teems with wasps and flies. The sweet-scented Tobacco plant is still in flower, but at this season seems more generously disposed, and refrains from closing up its petals and hanging down its head in the despondent manner it adopted during the hot summer days. "Grand weather," you say to a passing son of the soil. "It han't zazonable," he replies. "We be gwint to suffer fur this bynby, zhur enf." If ever we have a fine autumn this is certain to be a very popular opinion. I am not quite sure that it is justified by experience.

Why should a good crop of berries in the hedges be considered a certain forerunner of a very severe winter? It seems to me that the presence of wild fruits and berries rather reflects the past than foretells the future. It signifies a summer favourable to the development of the flowers and the perfecting of their seeds or fruit. *Senecio pulcher* has had a good time for blooming, and is still pushing up fresh heads. Roses keep on opening here and there, and even the blue *Salvia patens* is not yet altogether flowerless. As for Primroses, they look as if they would flower themselves out before next spring arrives. The *Gentianella* has thrown up a few solitary blue bells, but they seem out of place and lack the intense colour so noticeable in the early year. Wild flowers are wonderfully numerous for the time

of the year. Only a few days ago I could have collected quite a nosegay from hedgerows by lanesides. The red Campion and wild Carrot, Scabions and Ox-eye Daisy were to be found amongst plenty of others, while a patch of red Valerian in a railway cutting was visible from quite a distance.

The trees, too, have donned many a tint, and held their leaves longer than usual, owing to the absence of early frosts and autumnal gales, which quickly whisk them off the branches, whirling and scurrying them into many-coloured heaps in nooks and corners. It is curious that though individually some of the October tints are really intense and brilliant, yet an autumnal landscape, seen on never so fine a day, seems, at least to me, somewhat sad and sombre.

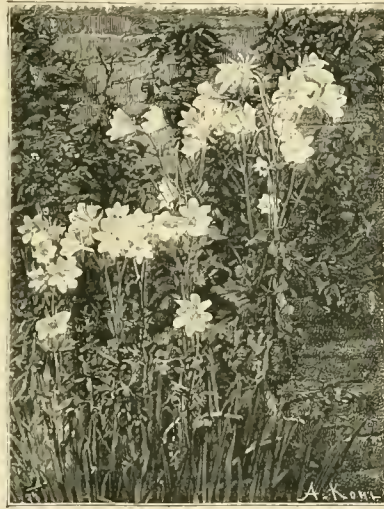
There is a very delightful view close by me, to be obtained by a ten minutes' walk up a most charming Devonshire lane. In October especially it is a lovely spot. The trees on either side of the way meet to form a leafy arch, shady and cool in summer time. After surmounting a rather steep incline at the end of this lane, a charming sight meets the eye, for the road suddenly dips down into a valley, the opposite rising side of which is a piece of common or waste land, covered with Bracken and Gorse, and dotted with Ash, Beech, Oak, and other trees. A stream runs across the bottom, sometimes dried up in summer, and on the right is a cider orchard, the trees, some old and gnarled, smothered with soft grey Lichens and always beautiful, especially so in spring and autumn. Away to the left the road, continuing up the hill, is lost in a mass of foliage, amongst which one may distinguish the thatched roof of a pretty old cottage. The Beeches give wonderful colouring to the landscape, and so, too, do the tall, dying fronds of the Bracken struggling up through the undergrowth. The leaves of the Medlar are now of a rich old gold, but most of them have fallen. Thorn trees and bushes are of a lighter shade, contrasting well with the blackness of their twigs. Some of the green-leaved Japanese Maples give grand colour in the fall—yellows, orange, and browns. Brambles in the hedgerows assume many lovely tints, that require closer examination to appreciate. On a piece of an old stone wall, dotted here and there with Navelwort, one sees masses of Ivy-leaved Toadflax, its long trailing, delicate stems covered with bright green foliage, such a contrast to the deeply-cut and glowing red leaves of the Herb Robert growing, perhaps, next to it.

Many of the gardens in the neighbourhood are gay with outdoor Chrysanthemums, which the fine weather of the past month has brought to perfection. Nothing can be prettier now than large bushes of different coloured varieties, loosely staked or hitched to sunny walls. The dark crimson W. Seward is especially handsome thus, and comes of a splendid colour. In a wet autumn, however, the blooms suffer and present a miserable appearance. Then it is that one appreciates and sees the beauty in a garden well stocked with ornamental-leaved plants and shrubs like the Palms, Yuccas, Aralias, Bamboos and Ivies, especially bushes of the variegated kinds, which look extremely bright in wet weather. The common Hart's-tongue Fern never looks so well as when on some dreary autumnal day it is surrounded by a lot of its deciduous allies—a veritable oasis in a desert of withering fronds.

Autumn is a busy time, yet a time of reflection. It has, as a season, many beauties, and is always full of promises. Some are fulfilled, some broken, but hope remains. We are always looking forward to the future, and in

that lies the essence of pleasure—expectation. —M.

— One of the showiest of our deciduous shrubs this autumn has been *Acer polymorphum atropurpureum*. When planted facing the sun and backed up by some light evergreen foliage the effect was charming. The leaves assumed that deep crimson hue so often seen on the *Ampelopsis Veitchi*, but never before have I seen them so rich as they have been this season. Many of the Maples have finely cut leaves, which look well during the summer, but they will, if planted in situations exposed to the sun, assume most glorious hues in the autumn. *Liquidambar styraciflua* has been more beautiful this season than ever, particularly the foliage on old trees where but little growth was made. On such the leaves were not so large, but they ripened much earlier, and therefore attained a brighter colour. We are apt to try to make things look too prim, but were we to allow more naturalness there would certainly be far more pleasure derived from these half-wild places. At one bold corner I noticed that an *Ampelopsis quinquefolia* that was planted near by had taken possession of a Holly tree standing close by: the growths had extended from branch to branch so that the foliage of the *Ampelopsis* became intermingled with that of the Holly, and as autumn approached the leaves of the former changed to a bright crimson, which



*Ostrowskya magnifica*. From a photograph sent by Mrs. Burroughes, Lower Berkeley Street, S. W.

was shown up to great advantage amongst the green. At a distance one would have thought the tree was covered with berries. *Quercus coccinea* has also been very fine this autumn. What a pity it is that this is not more planted in our woods. Not only is the tree beautiful in itself, with its peculiar fissured bark and large deep-cut foliage, but the leaves assume those glorious hues in autumn most difficult to describe, and as they remain for such a length of time before falling, make quite a feature in the landscape. A large tree growing not far from here has been most beautiful this autumn. There are of course many noble trees that have bright foliage, but most of them shed their leaves the first sharp frost that comes, while others cling more closely, and are only removed by strong gales. It is, however, amongst the shrubs that we must look for the brightest foliage. Some of the *Andromedas* are very conspicuous in this respect, their leaves turning a glowing crimson, which colour they retain for weeks. *Berberis thunbergii* is also very peculiar in this respect, particularly when planted in exposed situations on poor soil. Most people know the common *Viburnum Opulus*, *Cornus sanguinea*, *C. atro-sanguinea*, and the common varieties,

all of which assume bright colours in the autumn. The foliage of *Euonymus europaeus* along the hedgerows at the present time is most conspicuous, for, as most of the other leaves have fallen, there is little else to gladden the eyes in the way of colouring. *Rhus Cotinus*, *R. glabra coccinea* and *laciniata* have this autumn been grand. The leaves of *Koeleruteria paniculata*, *Rhamnus Frangula*, *Mespilus canadensis*, and many others have also been beautiful. As the time for planting is now here, many of the things mentioned would be most useful for planting alongside carriage drives or woodland walks. The situations chosen for them should be such as would be suitable for their growth, and at the same time give them room.—H. C. P.

## FLOWER GARDEN.

### THE GIANT BELLFLOWER.

(*OSTROWSKYA MAGNIFICA*.)

I SEND a photograph taken on July 1 of a small group. It will be seen that the plants are too near together, for of the fourteen flowering stems those at the two ends of the line far surpass the others in height and strength. They are growing in the garden at Ketton Cottage, Rutland, on a south border about 4 feet from the wall in front of a row of Crown Imperials. The plant at the west end of the line is considerably more than 6 feet in height. The roots were planted either in 1894 or 1895, where they flowered last summer. Two of them had flowered more than one season before, and the others, four or five in number, had never bloomed. The ground was dug out about 2 feet in depth, and first some manure and fresh loam from a pasture mixed with a good deal of sea sand were put into the hole and carefully packed round the slender and very brittle roots, of which the best were at least 15 inches long, the crowns being some 6 inches below the finished level of the bed.

The situation is naturally dry and is fully exposed to the sun, and the ground is well drained. In winter, Pine needles were strewn on the surface, and in frosty nights in spring an awning was drawn down from the wall, in front of which it will be seen the plants stand, but it is doubtful if either precaution is necessary, as young seedling plants in another bed quite unprotected have not suffered from the effects of frost. Of other care this beautiful stranger appears to require none.

A coloured plate with a full description of this handsome plant will be found in THE GARDEN of December 29, 1888.

STAN H. BURROUGHS.

16, Lower Berkeley Street, S. W.

**Iris stylosa.**—The Algerian Iris, to which, by the way, the cumbersome specific name of *unguicularis* is sometimes applied, is flowering very freely at Kew in the narrow border outside the Orchid house where the *Belladonna Lily* flourishes. Sheltered in this way, not only does this Iris flower well, but the blossoms are not injured by rough winds, which may happen where exposed, as the petals are fragile. While this may be justly regarded as the last Iris of the season, the small bulbous species with their exquisite blossoms soon make their appearance with the advent of the new year. The flowers of *Iris stylosa* emit a very pleasing fragrance.—H. P.

**Seed-sowing in boxes.**—Not infrequently it is advised to sow the seed in shallow pans or boxes when instructions are being given for certain work. Such advice is doubtless given in good faith, though so far as the boxes are concerned some thought should be given as to their suitability for the work. Such things as batches

of cuttings being lost just as they were rooted, or seedlings going suddenly off soon after they are germinated, are too frequently known while the reason is still far from clear. In such cases often the true cause of failure is not discovered. Where boxes are freely employed, I have reason to believe they are most detrimental to success on account of the frequent rapid out-growth of fungus from decaying wood. Very often the damage is complete before the evil is discovered. Much trouble and anxiety may, however, be saved if all boxes intended for seeds or cuttings were of sufficient size and strength to admit of their being charred sufficiently to kill any fungus that may be present, or, better still, where wood is largely used for these purposes to put the lengths into a pickle of creosote. With the wood cut into lengths ready for placing together, the ends as well as the sides would receive the dressing, which would act in the twofold capacity of saving the timber as well as safeguarding the cuttings or seeds.—E. J.

### HYPERICUM REPTANS.

THE St. John's Wort, or Rose of Sharon, as it is called by some, is a favourite with many. The genus contains a large number of plants. Nearly all have fine yellow flowers, which, in olden times, from their fancied resemblance to the sun, gave the *Hypericum* its reputed magical powers as the dispeller of evil. The St. John's Worts are varied in habit and stature. Some are tall and weedy-looking; some are of graceful habit and with beautiful flowers. Some are herbaceous, and others are of shrubby or sub-shrubby habit. A number are of dwarf, tufted or trailing growth and of great value for the rock garden. Among the last, none are more pleasing than *Hypericum reptans*, the subject of this note. The size of the flowers is large in proportion to that of the leaves, and it is a pleasant surprise to many to see so small a plant have such large blooms. It forms a close carpet, although of trailing habit, and soon covers over with its pretty foliage a perpendicular or sloping stone where so placed that it can droop over and on to the rock. The plant is so close-growing that it only rises about 2 inches above the level surface of the pocket in which it grows. The neat little green leaves, with a slight glaucous tint upon them, are not more than three-eighths of an inch in length, and the bright and almost perfect flowers are each quite an inch across. The blooms are of a clear yellow. The only fault I can find with the plant here is that the flowers have a tendency to hide themselves in the foliage instead of rising above it. *H. reptans* gives very little trouble here, but cannot be moved readily when the plants become large. When I have had occasion to remove a large plant, the plan adopted was to water the soil about it and then to press the earth firmly about the roots. The trowel is then inserted deeply all round so as to cut off the ball thus formed from the adjoining soil. The plant can then be lifted with a small spade or a trowel. This method cannot, as a matter of course, be adopted where the *Hypericum* is growing in a crevice, and in this case it may be found better to let it alone unless the stones can be carefully removed, so as to leave the roots intact with as much soil as possible attached. Young plants are easily raised from seeds, which are sometimes slow of germination, or by cuttings of the branches or slips taken off with a heel. It comes from the Himalayas, and, like many other plants from the same quarter, does not flourish everywhere in our climate. It occasionally looks unhealthy in spring, where it has been fully exposed to all weathers during winter. To preserve it, a

number of good growers of alpines cover it at this season with glass or other protection, and say they cannot keep it otherwise. With me it does not require this. For several years it has been quite exposed to the freaks of our climate. If it should look a little shabby in the beginning of spring the unhealthy appearance disappears when fine weather comes. I grow it in very sandy peat, and it thrives best in this garden in one of the pockets of a rock garden facing almost due south. This rock garden is a little too dry, and in consequence the alpines planted in it are treated in spring and summer to occasional copious supplies of water. The drainage is, however, perfect, and the watering is very beneficial to this St. John's Wort. It is not to be found mentioned in ordinary works of reference. Those who have access to Sir J. D. Hooker's "Flora of British India" will find it there. It is named in the "Index Kewensis" and the Kew "Hand-list of Herbaceous Plants." It is a choice little plant worthy of a place in good collections of alpine plants.

*Carsehorn, Dumfries, N.B.* S. ARNOTT.

### PEONIES NATURALISING.

MR. E. JENKINS (p. 440) has not apparently given himself the trouble, nor done me the honour, of understanding why my note on the above was penned. It is all very well to say that these Peonies can be well grown "when established," but he carefully avoids, or has overlooked, the question which my note was penned to answer, viz., as to their establishing themselves and succeeding well when planted among rough herbage with a view to their becoming naturalised. If Mr. Jenkins can show me where this has been successfully done, I shall readily admit that I am wrong, but my experience is that very few indeed of the named varieties are strong enough to rough it in this way, and the few that do tolerably well are not nearly so robust as the double form of *P. officinalis* planted under the same conditions. It is hardly to be expected that a plant which, as all authorities combine to tell us, enjoys a rich and moist soil away from the roots of trees will be seen to the best advantage in situations where these facilities to good growth cannot be given. I do not quite understand Mr. Jenkins' allusion to "named kinds" of Peonies. One would think that I had been condemning the whole genus out of hand, whereas I wished to convey my experience only with those members of the herbaceous section which have been given varietal names. Of these I have under my charge here something over forty varieties, growing in cultivated ground, and most of these would leave Mr. Jenkins' "good specimens" of five years' growth well in the rear. I only allude to these as Mr. Jenkins appears to doubt if I quite know what a good Peony is. I must reiterate, however, that among these there have not been found for naturalising any so satisfactory as *P. officinalis* fl.-pl., even though strong crowns have been planted in August in well-prepared soil, from which, moreover, the surface herbage has been cleared away twice a year since planting to give them a better chance of growing strongly. I fear that, in his haste to restore the good character which I never took away, Mr. Jenkins has overlooked the point of the notes penned by Mr. Burrell and myself.

J. C. TALLACK.

**Lily of the Valley var. Fortin.**—In THE GARDEN, September 4 of the present year, a beautiful coloured plate of this giant variety was published, with a very short notice, under the erroneous name of var. Fontin, instead of Fortin. The history of the plant is as follows: About 1878 M. Blondeau, the head gardener in a large private garden near Paris, had a large bed of Lily of the Valley made of a mixture of half a small variety and half a very large one. He discarded the former and carefully selected the latter; the

result was the origin of this splendid variety. Shortly after he gave some crowns to a neighbour friend named Fortin, who grew the plant with great care, exhibited it at a meeting of the Société Nationale d'Horticulture in Paris, where the plant was named var. Fortin in honour of the exhibitor. As to priority, the name var. Blondeau ought to prevail, but var. Fortin has been accepted by the public and the trade, although the term giant would be the best. This is by far the finest and largest variety known, being a free bloomer, robust grower, perfectly hardy, as sweetly scented as the type, and forcing well. As regards foliage, spike, and flowers, it is double the size of the type and much larger than any other kind in cultivation. The true stock is still very scarce and somewhat expensive, and great care must be taken, as several French and foreign growers and merchants are persistently supplying fine Berlin, Hamburg, or Dutch strains for it, which may lead to disappointment. There is but one species of the favourite Lily of the Valley (*Convallaria majalis*) profusely found in English woods and other countries. All other varieties or forms are merely accidental, or due to selection or improvement on the type. In 1858 M. Duchartre mentioned a giant variety which has not been observed since. The Dutch and German strains are famous, but none can compete with the variety Fortin. The following varieties, double white, rose coloured, and double rose, are very old sorts, seldom seen in gardens. The white and yellow variegated-leaved kinds are interesting on account of their foliage, but are not generally grown.—D. GUMENEUF, 48, Rue St. Merri, Paris.

### ACONITUM.

(MONKSHOOD.)

THE kinds of *Aconitum* that receive attention from cultivators of hardy plants are really very few. Happily, all the kinds worth growing for effect in the garden are of the easiest culture, being quite content in what is often the very poorest of soils. These perfectly hardy subjects will be quite at home in any ordinary garden soil, such as is usually found around shrubberies, on the lawn, in the woodland or such places. It will, I think, readily be admitted that, so far as colour is concerned, these everyday subjects are very striking, particularly so when seen at a short distance off. In the ordinary hardy plant border what is usually seen does not impress one, frequently from lack of material and other causes. It is quite another thing when broad masses of these things are seen with suitable surroundings. Many may have been deterred from employing these plants to the full in gardens generally owing to the poisonous character of their roots, and for this reason it is always best to keep them entirely free of the kitchen garden. For obvious reasons also should these things be kept from children's gardens, where perhaps greater danger exists than in any other direction. In the case of gardeners generally ordinary care will prevent any waste material being carelessly cast aside when division or replanting has been done. These plants may be increased freely by division, preferably in early spring with returning growth, when the numerous small tubers quickly take to the soil. Seeds are also produced very freely, and if sown as soon as gathered will germinate almost immediately. The following are among the best of these, the majority of which attain to 4 feet or 5 feet high, and from their usually vigorous stems are quite self-supporting:—

**A. ANTHORA.**—This very distinct species is abundant in the Pyrenees, Switzerland, &c., and is followed by several very distinct varieties, all of which, like the type, have yellow panicles of flowers. It is about 2½ feet high. **A. A. grandif.**

florum has larger flowers, these, as indeed the whole panicle, being pubescent.

**A. CAMMARUM.**—A blue-flowered species from Hungary, Austria, &c., the panicles usually few-flowered. A well-marked variety of this, *A. C. Starkianum*, is a capital garden plant, rather dwarf in habit, with few flowers, and foliage not unlike that of the Fair Maids of France.

**A. FISCHERI.**—As a garden plant this fine species is at once among the boldest and best worth growing in any good collection of hardy plants. The growth will attain from 4 feet to 6 feet, terminated by a fine panicle of blue flowers. The foliage of this is also attractive. It is an autumn flowering species abundant in Asia and North America. It is synonymous with *A. autumnale* and *A. californicum*.

**A. FORTUNEI.**—This is also called *A. chinense* and *A. japonicum*, and by the latter is freely cited in hardy plant lists. The plant is one of the most valuable for the intense bright blue shade of its flowers, which are produced on stout stems and in large compound panicles. It is a handsome kind, attaining to 4 feet high.

**A. HETEROPHYLLUM.**—This is a distinct Himalayan species with pale yellow blossoms that are shaded with blue at the front. The usually much-divided foliage of many species is replaced by broadly cordate and coarsely toothed leaves, not unlike those of the Nettle. It is also said to be non-poisonous. Height 2½ feet.

**A. JAPONICUM.**—A synonym of *Fortunei*.

**A. KUSSVEZOFFI.**—A tall-growing species, 6 feet high, from Kamtschatka, with large and dense compound panicles of pale violet blossoms. A most effective plant for the woodland.

**A. LYCOCTONUM.**—Under this name a rather tall and slender-growing species, with finely-cut leaves and pale yellow flowers, is somewhat freely given in hardy plant lists. In at least two text-books published at wide intervals this species is described in the same precise terms as having "livid-violet" flowers. Whatever the correct name may be, the plant is well known in gardens and freely met with. I believe the plant grown in the Royal Gardens, Kew, under the above name has also yellow flowers.

**A. NAEPELLUS.**—This fine species, with its numerous varieties, is the best known and perhaps the most widely grown of this extensive genus. At the same time it is one of the most virulent of poisonous plants. Its varieties bicolor and versicolor are of more value in the garden than the type, the two named being very distinct in the varied hues of their blossoms.

**A. ORIENTALE.**—A fine species, with creamy yellow flowers, from the Caucasus, also Persia and Georgia, is in the way of *A. lycoctonum*; indeed, *A. orientale* var. *altissimum* is regarded as synonymous with *A. lycoctonum* var. *altissimum*; hence possibly the confusion referred to above. Like the last-named, the eastern *Aconite* is of tall growth, and this with the more heavily dissected leaves appears to coincide generally with *A. lycoctonum*.

**A. PANICULATUM** is in a measure allied to *A. Napellus*, but possesses a much looser and more spreading panicle of violet-blue flowers.

**A. PYRENAICUM**, a yellow-flowered species from Siberia and the Pyrenees, is only some 2½ feet high, the rather hispid leaves being distinctly parted. It is a compact growing kind, with a dense raceme of flowers.

**A. UNCINATUM** is a tall species, upwards of 6 feet high, from North America, with lilac-blue flowers in a large loose raceme. It is an excellent kind for the wild garden or similar place.

**A. VARIEGATUM.**—This is a well-known species, and with its varieties, *A. v. bicolor* and *A. v. albidiflorum*, is frequently seen in hardy plant collections. The two kinds named are perhaps among the most effective for grouping of this genus.

The foregoing are but a selection from a genus of some eighty or more species, and possibly as

many varieties. All the kinds, with the exception now and then of *A. lycoctonum*, multiply quite freely at the root, and should be increased in this way rather than by seeds, as the seedlings are frequently inferior to the parent.

E. J.

#### THE FAILURE OF GLADIOLUS CORNUS.

I HAVE been a grower of hybrid *Gladiolus gandavensis* for upwards of forty years, and I must confess that it is as great a mystery to me as ever it was. I have grown it in various situations and in different localities, I have followed out the instructions of the best growers, and yet year after year I have had to deplore the failure of a very large percentage of my corns. This failure may be attributed by other growers to many and various causes, and yet I have never found any of these causes give a satisfactory solution of the puzzle. I remember many years ago asking M. Souchet as to the best soil to grow them in, and he said that ordinary market-garden soil was as good as any; the soil in which he grew his at Fontainebleau was of this character, light and friable, and, so far as I could see, with a deal of humus in it. When thus I ventured on their culture at Deal in a garden which had been for a long time a vegetable garden, I thought I had obtained what was needful. And so again when I took up my residence here thirty years ago, with a garden which had been considerably neglected, but which was mainly composed of alluvial deposit, I hoped that my failures were at an end, but every year has told its tale of disaster; sometimes more heavy than at others. I recollect one year at Deal when my whole collection nearly failed, while in other seasons a large percentage had always gone wrong. One very experienced grower tells me there is too much humus in my soil; others have told me that the failure arose from growing exhausted bulbs, and that I had grown them year after year and allowed them to flower and in some cases to ripen seed, and consequently the corns were exhausted. This does not strike me as being a correct view of the case. Others have said that taking them up and drying them off tend to weaken them, and had they been left in the ground they would not have decayed. My own impression has been that a great deal is due to the uncertain character of our climate. In the autumn months when the corns are harvested, I have every year received some corns from Fontainebleau. I have remarked on the silky texture of the outside covering, which I attributed to the fine time they had for ripening, but my views on the subject have been considerably damped by the experience of the present season. We have had one of the driest and most sunshiny autumns I ever recollect, so that when I began to lift my corns and saw fine and well-conditioned bulbs, I thought that this was the consummation of my views; but when I came to clean off the corns I found out how vain a thing it is to trust to appearances. I have already said that I received some bulbs yearly from Fontainebleau, and last year I had a few of the novelties sent out by M. Souchet in the autumn of 1896. These had no time for deterioration, and yet in more than one instance the corns had entirely perished. In another case, I lifted six fine-looking bulbs of one variety, and of these five were perfectly sound and in every way good corns, while the sixth was completely gone. Although the outside skin appeared good, it was mouldy and rotten. In another case, four out of nine bulbs of one variety had in the same way perished, and, therefore, as I have said, I

am as greatly puzzled as ever, for if it was the humus in the soil which caused the damage, why should the other bulbs have escaped; or if it was exhaustion, why did not all perish from the same cause? There is no sign of the existence of anything like the *Eucharis* mite to cause all this, therefore I am quite at a loss to account for it. I have tried all sorts of remedies, but I am convinced that there is no cure when once the bulb is affected.

I may be told that all this is very discouraging, and enough to deter anyone from growing this beautiful flower. To this I may reply that it is always better to know our difficulties than to ignore them, and that owing to the large quantities which are grown from spawn, corns can now be obtained at so reasonable a price that all losses may be easily replaced. Growers of *Hyacinths* do not scruple to consider their bulbs as simply good for one year, and do not grudge buying fresh bulbs every season, and the corns of *Gladioli* can be obtained at quite as cheap a rate, if not cheaper. It is a curious fact that whether in France or England the wholesale culture is in so few hands; you may write to any nurseryman in France to order bulbs, but he will not supply them from his own culture. It is the same in England. These same firms also grew a number of seedlings from carefully hybridised flowers; these unnamed seedlings are to be had at a very reasonable rate, and I can testify from my own experience that many of the flowers produced from these roots are quite as good as the named varieties of two or three years back, so that lovers of the flower have always the opportunity of growing them in their gardens without much expense. My observations, of course, only apply to the corns of the *gandavensis* section, and not to the earlier *G. ramosus* or to the so-called hardy varieties of the *Lemoinei* and *Nanceianus* type. The former are only suited for greenhouse culture, while the two latter are apparently hardier, I think not nearly so beautiful, and when the hybrids develop more of the *gandavensis* strain and less of the *Saundersi* type, they become less hardy. I think it must have been for the reasons that I have brought forward that the late Rev. Joshua Dix, who was a great admirer of the flower and who wished to have a special society to promote its popularity (as has been done in the case of other florist flowers), failed in his object. DELTA.

**Primroses.**—It is not often that these simple but beautiful hardy flowers give us such a fine early winter display as they have done this year. Each year I raise a few from seed, and these are planted about in any spare bit of shrubbery or herbaceous border and the best ones propagated. By this means one gets a nice variety both of self-coloured and edged flowers, while even the worst are useful for brightening up odd corners. In the moist, heavy soil here they luxuriate and form large spreading masses that one can cut handfuls of flowers from daily in spring, and the rich dark crimson and purple tints are difficult to beat then in outdoor flowers of their colour. The seed may be sown at any season, but preferably soon after it is gathered. Sow thinly in a frame or in the open air, keeping the seed-bed moist and leaving the seedlings until they have made a couple of rough leaves before pricking out on a shady moist border. Slugs and small snails are very fond of them, and will soon clear them off if allowed to. Soot and lime in equal proportions are the easiest preparation for these pests, sprinkling this about rather freely on damp evenings, when the slugs are likely to be abroad. From this bed the plants may be raised and planted in their flowering quarters, or they may be left and selected from the first trusses of flower they throw up.—R.

GARDEN FLORA.

PLATE 1149.

ANTHEMIS AND ERIGERON.

(WITH A COLOURED PLATE OF ERIGERON SPECIOSUS AND ANTHEMIS TINCTORIA (PALE VAR).\*)

In the coloured plate to-day we have representatives of two important genera among hardy plants. The two families are well known and largely grown. Indeed, so worthy are they, that they are among the most frequently seen of summer-flowering subjects. Especially is this true of the Erigeron, a plant almost sure to be found in a collection of hardy plants. In short, this particular species is to the early summer garden of the greatest importance when arranging the flower groups in the garden—precisely that of the Italian Starwort (*Aster Amellus*) and varieties in the latter part of the summer. For the purpose of grouping this Erigeron is among the best of its tribe and is very free flowering. It is reliable in all soils, growing vigorously and flowering freely even in the year of planting. Even quite small plants if put out into good ground early in the year, say during the latter part of February, will



*Erigeron macranthus.*

make fine flowering bushes the same season. It is not many hardy plants that do so much in so short a time, and once its season of flowering begins it is continued for many weeks. No other species of Erigeron produces the same mass of flowers week after week, and this, as also its convenient height, has rendered it a useful plant even in the smallest gardens. Where it is so desired, either in autumn or

\* Drawn for THE GARDEN by H. G. Moon at Gravetye Manor. Lithographed and printed by J. L. Goffart.

spring, this species may be increased to any extent by division. Several other species are of quite different character, and to these I will refer in detail later on.

The following will be found the most impor-



*Anthemis macedonica.*

tant species of Erigeron and well worthy of general cultivation:—

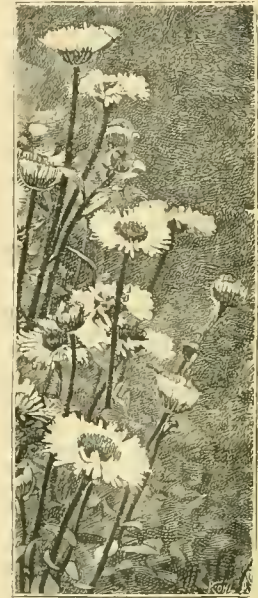
**E. AURANTIACUS.**—This charming species was received from Turkestan nearly twenty years ago. The colour of the flower-heads was so entirely novel and distinct from that of any other known species, that its flowering was looked for with some interest. The species, however, proved true to its colour. It is not more than 9 inches high in its most vigorous condition, and only attains this by the best cultural methods. In the rock garden or the front of the border the plant should be grown freely in groups where the orange-coloured heads display themselves to advantage. Slugs are rather partial to this kind during the winter, and will speedily devour it if left to themselves. The species, as is well known, is of close tufted growth after the manner of the alpine Starwort, while the growth is not so abundant as to permit of frequent division like the last-named. The above species may be raised freely from seeds. These if sown now would flower during the ensuing year; indeed, in this connection the plant is worthy of special care, as by raising seedlings at intervals during the spring months the flowering period may be prolonged.

**E. CAUCASICUS.**—A very pretty species, introduced to cultivation early in the present century. It attains nearly or quite 2 feet high, and bears masses of rosy-purple Rhodanthe-like heads of flowers. These are not large, but their abundance creates a very pretty effect in the border.

**E. GLABELLUS.**—A free-growing species from the North United States, and bearing a cluster of purple flower-heads on stems about 15 inches high. It is a useful border kind, readily distinguished from others of its kind by the numerous florets composing the ray encircling a yellow disc. Readily increased by division and seeds.

**E. GLAUCUS** (syn., *Aster bonariensis*).—This is one of the gems of this genus, notwithstanding it is a rare plant in cultivation to-day. Many years ago in the Tooting nursery of the late Mr. Robert Parker I had charge of the finest masses of this plant I have ever seen. The species usually sold under the above name is a form of *E. speciosus*, a totally distinct plant. Singularly enough, while the above species is well and truly described in the "Dictionary of Gardening," the plant figured as *E. glaucus* has nothing in common with this kind. An excellent coloured drawing of the true plant may be found in Wooster's "Alpine Flowers," plate xvi. In this drawing the shrubby character of the plant is well shown, as also the oblong-ovate, spatulate form of the

distinctly glaucous entire leaves. These latter are slightly clammy to the touch, a characteristic not found in all forms of the Fleabane. For the rock garden I regard this as one of the finest of all. The florets of the ray are much broader than usual, as also the flower-heads. It is a vigorous sub-shrubby evergreen species with free-spreading branched habit, and when well established will attain 18 inches high and 2 feet across. The sturdy lilac-purple flower-heads appear on leafy



*Erigeron multiradiatus.*

stems a little above the rosettes of leaves. It is an easily grown species, and may be increased freely from cuttings or division when large enough, and doubtless seeds, though of this species I do not remember collecting any. It is said to belong to North America, and was introduced in 1812.

**E. GRANDIFLORUS.**—This is also an excellent species, with dwarf evergreen tufts close upon the earth, after the manner of the alpine Aster. The flower-heads are large and of a purple shade,



*Erigeron glaucus* in Messrs. Veitch's nursery at Exeter. From a photograph sent by Mr. F. W. Meyer.

and in warm soils this handsome species thrives admirably. There is a pure white form of this plant not very plentiful in cultivation, yet a capital companion to the above. This white form is usually regarded as synonymous with the white of the alpine Starwort (*Aster alpinus albus*). It



Illustration of a bouquet of flowers, likely daisies, with pink and white petals and yellow centers.



certainly somewhat resembles this in growth and its large handsome flower-heads.

*E. MACRANTHUS*.—An excellent North American species, attaining about 18 inches high, and producing freely its large heads of violet-purple.



*Erigeron aurantiacus.*

Among the midsummer-flowering kinds this should always be found.

*E. MICROANTHUS*.—This pretty little plant with its abundance of Daisy-like blossoms, varying in their tints with age, will be better known perhaps by the synonym *Vittadenia triloba*. It forms patches 2 feet across that in late summer and early autumn will be literally smothered with vari-coloured pink and white blossoms. The patches of leaves are quite close to the earth, while the blossoms attain to 6 inches or 8 inches high.

*E. MULTIRADIATUS*.—A species of recent introduction from the Himalayas, differing from the rest of its tribe in the great number of its ray florets. These are of a purplish shade and the disc yellow. The plant grows from 1 foot to 2 feet high.

*E. ROYLEI*.—A dwarf growing and tufted species also from the Himalayas, with handsome flower-heads of a bluish purple hue, each about 2 inches across, and disposed in a loose corymb. It



*Erigeron glabellus.*

is about 9 inches high, and an excellent plant for the rock garden in good deep soil.

*E. SALSUGINOSUS* (Gray).—There are at least two distinct plants in gardens bearing this name, the one coarse and weedy, and, by comparison with that under notice, not worthy of cultivation. One of the few places we have seen the true plant

is in the Winehamo Hill collection, and as there grown it is one of the gems of the genus. This species flowers in early summer, and produces large handsome heads, each fully 3 inches across, on erect branching stems some 18 inches high. The ray florets are of a pleasing grey-mauve tone, distinctly pleasing, and very striking and effective. Indeed, the very size of the flower-heads renders this one of the most valuable. The root-stock is composed of a creeping and rather dense tuft close to the earth.

*E. SPECIOSUS*.—At once the best known and most widely grown of the whole family of the Fleabanes. The plant, from its easy culture and the great, almost endless supply of blossoms that it produces for months in succession, is well deserving the popularity it enjoys. It is also known as *Stenactis speciosa*. Several forms of this excellent plant may be found in hardy plant lists, the one figured being the type. A variety known as *E. s. superbus*, or *splendens*, as it is sometimes called, is of lighter hue, and is perhaps the most profusely flowered of this group. Another distinct kind, *E. s. glaucus*, referred to in lists as a possible hybrid, is doubtless but a good form of the plant under notice, the florets of the ray deep purple. The foliage in this is of a glaucous grey tint, the plant being of the same height and equally free flowering. The typical species inhabits North-Western America, and has long been known to cultivation.

These are the most worthy of this group in general cultivation, yet apart from these are several hybrid forms that will doubtless be heard of in the near future. What seems to strike one, seeing the large number of seedlings raised, is that as yet no white form of *E. speciosus* has made its appearance. Such a plant would prove an acquisition to our gardens.

ANTHEMIS.

The other genus represented, viz., *Anthemis*, is equally well known, and either in its annual or perennial forms is frequently seen in gardens. Its greatest value perhaps is the ease with which the forms of *A. tinctoria* may be raised from seed in the early spring, and during summer and autumn provide a great abundance of elegant flowers that are bright and cheerful in a cut state, and equally valuable in the mixed border in the open.

*ANTHEMIS ALBOON*.—The plant bearing this name has been referred to the *Achilleas*, where it is now described as *Achillea ageratifolia*. It is, however, somewhat difficult to reconcile the specific term here employed with the group known as *Ageratum*, since the *Anthemis* is composed of compact rosettes of very narrow, silvery leaves that lie quite close upon the soil, the large white and yellow-eyed blossoms being produced singly on stems at 6 inches to 9 inches high. It is a capital alpine and requires the very warmest and sunniest spot in the rock garden, always in deep gritty loam.

*A. BIEBERSTEINI*.—A Caucasian species with large white flower-heads, the leaves being covered with a silvery pubescence. It is a neat, attractive species. Another very charming alpine with pure white flowers is

*A. MACEDONICA*, which forms spreading tufts and flowers freely late in summer at 6 inches high.

*A. MONTANA* is also of the silvery leaved section, of tufted growth, and has pure white heads of flowers.

*A. TINCTORIA* (Ox-eye Chamomile) is a well-known British plant some 18 inches high. The flower-heads are yellow and produced in corymbose heads in summer. A variety known as *A. t. Kelwayi*, with large, bright yellow, almost circular flowers, is very fine, while another—*A. t. pallida*—is similar to, if not identical with, that figured in the accompanying plate. All the forms of *A. tinctoria*, while being true perennials, may be raised from seed, and give a welcome variety for the garden. Not the least noteworthy feature of these forms is their adaptability to rather dry positions. At the same time, in the

ordinary mixed border they are free flowering and useful.—E. J.

With regard to *Erigeron glaucus*, here figured, Mr. F. W. Meyer, of Exeter, writes:—

Coming from the westerly part of North America, this plant is very hardy, and I have



*Erigeron speciosus superbus.*

always found it easy to grow. The plant represented in the engraving was photographed in Messrs. Veitch's nursery at Exeter, where it has been planted out about two years, and forms a spreading mass about 2½ feet across and 9 inches high. It bloomed most freely during July and



*Anthemis tinctoria.*

August, but even now (in December) its leaves form quite a handsome object. *Erigeron glaucus* has long prostrate stems, bearing in summer an abundance of flowers on stalks 6 inches to 9 inches long. The ray florets are of a mauve colour, and the disc florets bright yellow, somewhat after

the style of the alpine Asters. The whole flower—or, more correctly speaking, flower-head—is about the size of a half-crown piece. The alternate leaves are from 2 inches to 3½ inches in length, and 1 inch to 1½ inches wide near the apex. They are smooth, but have very minute hairs on the margin, which is either entire or sometimes slightly dentate. The plant here illustrated is growing in a westerly aspect, where it flourishes to perfection, but I have seen it do equally as well in other positions.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

**WINTER WORK.**—Apart from the general work, such as digging, trenching, and manuring vacant quarters, there are many other jobs which, if not taken in hand now, stand little chance of being done if deferred until spring. Such work, of course, varies according to what is necessary in different gardens, but among other details mending or entirely forming new edgings, turning over and re-gravelling of pathways, as well as clearing out catch-pits and the renewal of drain-pipes where required can be done. As regards edgings, Box, when kept in perfect order, always looks neat and less formal than tiles. When allowed to become too high and thick, it not only becomes untidy but forms a safe lurking-place for slugs and other vermin. In forming the margins to paths in new gardens, or repairing those in old ones, it is very necessary when Box is used that the ground be properly prepared and levelled some weeks or so in advance of planting. It is an easy matter to do this when the paths are straight and are at right angles to each other.

**DRAINING.**—Calling to mind the drought of recent summers, many crops no doubt would have been better able to resist its effects had less draining been attempted. In connection with this one garden is recalled to mind which was formed some fifteen years ago. The site selected was quite level, and lay in rather a hollow. The soil, too, was cold and ungenial, and nothing could be done in the way of digging for weeks after rain. Trenches were cut about 12 yards apart, 3 feet deep, and 2 feet across. These were filled in with clinkers about 9 inches in thickness, and the soil replaced. Each year since the ground has received a good dressing of waste garden soil, burnt rubbish and lime, with the result that these additions of compost have become incorporated with the natural soil and greatly improved the staple, while the drainage as it were was only temporary, sufficient to relieve the surface of moisture while the work of improvement was going on. Had an elaborate system of drain-pipes been used, it may have led, together with the addition of more porous material, to the crops feeling the effects of a drought. This is quoted to show that too much may be done in the way of drainage, and those who have retentive land to deal with and are in doubt how to drain it and find a suitable outlet would do well to follow the above plan, which will prove a sure and cheap way of overcoming the difficulty, and find a useful means of doing away with a quantity of clinkers which generally accumulate in most gardens. As regards draining paths much depends on the way these are made and maintained. When properly formed, with the centre some inches above the sides, there is little need of surface drain and catch pits, which are continually getting choked up. It may be necessary at the lowest point in the garden to make some provision to conduct the surface water into some suitable channel after heavy rains, but whenever possible this should be into an open tank or pond, and although it may prove of more trouble to apply such water to crops during the summer than that through a main, there is a wide comparison in the beneficial effects of the former, and

for that reason it well repays for any methods that may be devised to store it.

Other useful work which should be done now is laying in a good store of Pea sticks and getting them ready for use. It takes some little time to trim and sharpen them properly, which is only too evident when the work is delayed until the moment they are required. The best and tallest of those used last season should also be looked over, repointed, and put into bundles in readiness for the early and dwarfier varieties, while Scarlet Runner supports should also be overhauled and new ones obtained if necessary. These may appear tritles, but it is by keeping these well in hand now that pressure of work is surmounted later on, and all tends towards securing good crops at their right season.

RICHARD PARKER.

### FRUIT HOUSES.

**POT VINES.**—If these were started in the middle of November, the buds will now be bursting. Such being the case, all which have broken satisfactorily may be tied to the trellis forthwith, and discontinue syringing them. If the point buds of any are inclined to grow away in advance of those lower down, or at the base, still keep the canes bent down, and syringe them until they are induced to make a more even growth. Leave surplus shoots on the canes until the bunches can be properly discerned, when all spare ones may be pulled off. As soon as the buds have fairly broken, raise the temperature to 60° at night and to 65° by day, and as the shoots and bunches lengthen out a further rise of 5° should be allowed. These will be safe temperatures to employ until the Vines come into flower, when the night heat may range from 65° to 70°, according to outside influences, but never exceed the first-mentioned figures if hard firing has to be resorted to. When in flower the day temperature should be raised to 75°, with a rise of 10° more with sun-heat, and the damping down, &c., greatly modified, if not altogether dispensed with, so that the atmosphere may be dry and buoyant and favourable for setting. In addition to this, the camel-hair pencil must be requisitioned, and each bunch fertilised with the pollen of the free-setting varieties. Between now and then such matters as the pinching of the shoots at the second leaf beyond the bunch, and the gradual tying of them down to the wires, must have attention. With regard to surplus bunches, although it is a good plan to allow the canes to develop a fair number, so that a selection can be made when setting is completed, it is folly to over-tax them, particularly at this stage of growth. The experienced grower will at once detect which to leave and which to cut off, but those who may be essaying a first attempt at forcing pot Vines should first reduce the number of bunches to one where there are two on one shoot, and that the best. With regard to the remainder, cut off all the weakest, and leave sufficient so that from six to nine bunches can be selected from among them finally, after they have flowered and set. Keep the fermenting bed made up with fresh materials, and see that the vapour troughs are kept filled. Attend to the damping of footpaths and syringing of walls and beds, which will require more frequent attention if fire-heat alone has to be depended on. As growth advances, more water will be required at the roots, and this must always be given in a tepid state. As soon as new roots begin to appear on the surface of the soil, apply an inch or so of rich top-dressing immediately after affording water, and water it to settle it down, when the hungry roots in search of food will soon take possession of it. Strips of zinc or pieces of turf should be employed to hold this top-dressing in position, also to afford space for holding water. When starting of pot Vines is deferred until the beginning of the new year, make preparations accordingly, and if the Vines have not yet been shortened back, do it at once and apply styptic to the wounds.

**EARLY PERMANENT VINES.**—These will not be in such an advanced state as the preceding, but, should mild weather continue, the buds will be breaking shortly. The temperature must then be raised, as soon as the buds burst and begin to get green, to 55° at night and 60° by day, advancing the temperatures 5° more when the young shoots are about 3 inches long. Syringing of the rods should cease as soon as a good even break has been secured. If a bed of leaves has been introduced as an aid to forcing, this should be turned frequently and added to as often as required. The best time to do this is in the early part of the morning, when if a chink of air is put on at the apex the steam liberated in the turning soon escapes. This steam continually rising from the bed of leaves will do away with a great deal of syringing, but after a spell of morning sunshine, necessitating the airing of the house for an hour or so, a good general damping down at closing time will be beneficial. When the heat is derived exclusively from the hot-water pipes damping must be done more frequently, but it must not be too freely indulged in at this the worst time in the whole year for forcing. If the borders were watered at the start they will hardly yet require further supplies; but if there is any doubt in the matter, test them in two or three places, and thoroughly moisten them, should they be found to want it, with water at a temperature of 85° to 90°. See that the coverings on outer borders are in an effective condition, so that if snow or heavy rains fall the water will run off and not chill the soil. If a regular succession is needed prepare another house for starting by the 1st of January. In many instances this will be the first house, particularly if several houses of late Grapes are grown. When this is so, and a Grape room in which to keep the fruit is provided, the supply can be kept up until the spring or until the early Grapes are ripe in the middle of May or first week in June.

**LATE GRAPES.**—If these are thoroughly ripe, and if the Grape room has been prepared for their reception as advised, they may be cut and bottled at any time within the next fortnight or three weeks. This will afford the Vines great relief and also give them a much longer period of rest. Late Vines experience little of this in places where the Grapes have to hang on the Vines as long as possible; hence the necessity for providing a Grape room wherever they are grown in any quantity. When the bottling is completed, prune the Vines if all the leaves are off them, and apply styptic to the wounds if they are subject to bleeding in the spring. The cleaning of the house may well be left for some future occasion, when outdoor work is suspended through inclement weather. On the other hand, if it is necessary to keep the Grapes on the Vines, great care is now needed. The bunches should be looked over at least once a week, which will keep them pretty free from decaying bruises. Robins are often troublesome about this time of the year if they gain an entrance to the houses, and they soon spoil a few bunches of Grapes if let alone. A strip of old fish-net thrown over the ventilators will exclude them. Make use of just enough fire-heat to keep the air in circulation when the ventilators can be opened but little. Keep the house dry and admit plenty of air whenever the state of the weather will allow. If the Vines are casting their leaves, gather them up daily.

**POT FIGS.**—The buds on the November-started trees will now be breaking, when the temperature may be advanced to 60° at night and 65° by day, with a rise of 10° more with sun-heat. As the leaves push out and develop, the syringe must be used more freely, and for the same reason a greater amount of damping down will be required to keep the atmosphere in a humid condition. Add more leaves to the bed as required, and pay great attention to this matter if they are depended on entirely for affording bottom-heat, which should not exceed 75°. Afford the surface roots a top-dressing of rich compost consisting of loam, bone-meal, and a little spent Mushroom manure, and adopt the same means for holding it

in place as advised for pot Vines. Once the trees get into full growth the roots need ample supplies of tepid water, and stop the shoots at the fourth, fifth, or sixth leaf, according to space at command for the development of foliage. A. W.

## ORCHARD AND FRUIT GARDEN.

### TRAINING THE FIG.

THE Fig would lend itself readily to almost any style of training if required, but as a rule it is generally grown either in the form of a bush for pot work, or fan-trained for covering roof trellises and back walls. Taking

#### BUSH TREES

first, special attention must be devoted to them from the time they are shifted from the cutting pots until the trees are fully formed, which will take two seasons. In the first place, cuttings should be made of short-jointed, well-ripened pieces of wood. These should be inserted singly in 4-inch pots filled with a sandy compost, and January and February are the two best months for their propagation. Bottom heat, such as is afforded by a fermenting bed in a forcing house, facilitates the rooting process, but they are best not plunged until the base of the cutting has had time to callus somewhat. When the pots become well filled with roots, lift and stand them on the surface of the bed for a few days, and then shift them into 7-inch pots. When the young trees start growing freely, pinch out the point of the shoot, which will encourage the formation of side growths. These as they lengthen out should be gradually tied down into a nearly horizontal position, which will leave the centres of the trees open. Pinch these shoots when about 9 inches long, and if kept growing in plenty of heat and moisture, fresh breaks will soon result from this stopping, and a good foundation will thus be secured. No further shifting will be needed the first season, but the following year they should be shifted into 11-inch or 12-inch pots, according to the size of the trees. This is best done as soon as growth becomes general and new roots are being formed. If the wood has been well ripened, no pruning will be required before starting them, but if at all soft and sappy, cut back the shoots to a sound bud. This will result in more growths being made than will be required, but a selection can be made from the best of these, pulling the others off or pinching them back. Care must be taken to regulate growth, pinching back all shoots inclined to grow away in advance of the others, and endeavour to obtain well-balanced heads not too full of wood. Have the wood thoroughly ripe by the autumn, and then a good crop of fruit can be secured the following spring. When the trees come into bearing, growth will be less vigorous, and in course of time they will become furnished with short stubby growths which are most fruitful. The trees would bear, if allowed to do so, while in 7-inch or 8-inch pots, but they would be longer in attaining full size. When good-sized bushes are desired in as short a time as possible it is better to delay their fruiting for a season, and encourage them to make all the growth they can instead. However, when a large collection of Figs is grown, trees in pots of the size referred to are useful for forming the front row. Turning next to

#### FAN-TRAINED TREES,

propagation for these is the same as for bushes. When the cuttings are rooted they may be planted out at once, but I prefer to pot them

on into 7-inch pots and plant them out after they have made from three to five shoots. To accomplish this, the point of the shoot should be pinched out as soon as the roots push into the new compost. This generally results in from three to five breaks being made, and instead of training them out as advised for bush trees insert a stake on either side of the young tree next the rim of the pot. Then place from two to three stakes at the back of the tree diagonal fashion and secure the ends to the upright stakes, thus forming a kind of improvised trellis for training the young shoots to in the same way that nurserymen train espaliers. When these shoots are about a foot long stop them, when others will in turn be formed, and sufficient in number to furnish the tree with future main branches. Planting may be done as soon as these lateral shoots are growing freely, and the same care will be needed as with bush trees to keep all growths inclined to be gross-habited stopped, and thus ensure a greater regularity of growth. No pruning whatever should be necessary the first two seasons if stopping and re-stopping have proper attention during the growing period, and the use of the knife will thus be obviated. The aim of the grower should be to get the trellis covered in as short a time as possible, and this is easily done once the main branches have been secured and trained out. A good extent of trellising can be covered the second year after planting, with good management, when the trees may be allowed to bear. When established, the pruning should be done much in the same way as with Peach trees, thinning out the wood if too much has been laid in, only in the case of the Fig the bearing wood must be left at a much wider distance apart. To obviate the necessity for much pruning the bearing wood should not be laid in too close together, and leave it full length if only one crop of fruit is desired. If two crops are to be taken, pinch the point out of every other shoot at the fifth or sixth leaf, and these will furnish fruit to succeed that borne by the wood of the preceding year's growth. Until the trees come into full bearing, a little root-pruning each winter will check any tendency towards gross growth.

There is another way of training the Fig that should be mentioned before closing this note, which is done in the following manner: If the house is a lean-to, having a trellis under the roof, instead of planting the trees at the front and training them upwards, plant them against the back wall, and when they reach the top bring them downwards. In this case fewer branches are required until the roof trellis is reached. Very good examples of this kind of training are to be seen at Gunnersbury Park and Eastnor Castle, and I have a large old tree trained in the same way. The wood, through having to grow downwards, is always short-jointed, it becomes thoroughly ripened, and is exceedingly fruitful; in fact, it is marvellous the crops of fruit that trees will bear when trained in this way. A. W.

**A new Pear.**—A new late Pear which promises well is *Le Lectier*, a very fine fruit. It appears to be a prolific variety, as young trees fruit very freely indeed. In my case the fruit had to be thinned, and this in a season Pears were none too plentiful. Its season with me is from now to February, though I am aware it is catalogued as a January fruit. My trees were on a south wall, in a light, much drained soil, and all the kinds are much earlier this season than usual. The fruit is large, melting, and for a late Pear of excellent quality. I have it only in cordon form—I mean fruiting trees—and it does well. I am planting it as a bush or pyramid for later supplies, and

probably in this way I may get superior flavour. —G. WYTHES.

**Apple Blenheim Orange as a bush.**—Few will question the value of this old favourite, as its good qualities are well known. Unfortunately, all cannot grow it, as if in standard form (the best for cropping) it takes some years before it becomes profitable, and many do not care to wait so long for a crop. A good return may be secured in a short time if this variety is grown as a bush on the Paradise stock. Grown thus it bears freely in a young state, and frequently produces splendid fruits, which are highly coloured and of a fine shape. I would not advise growing it as a pyramid or in any shape needing severe cutting back, as this does not conduce to fruiting. In bush form and allowed ample freedom, merely thinning out crowded wood, it bears freely and in a short time after planting. If grown as a pyramid it is too spreading to form a good tree and does not like severe pruning. In planting it is well to avoid manure. I find liquid manure during the growing season of great value, as it assists in finishing the crop and builds up fruiting wood for another season. —G. WYTHES.

**Pear Glou Morceau.**—In many gardens this Pear is not always first-rate as regards quality, but in a warm soil it is really good, especially after a hot summer. In the Thames valley, on a light gravel soil of no great depth, Glou Morceau is one of the best winter Pears. In such I get fine fruit and the quality is rich. The tree rarely fails to crop, doing well in any form. I would not advise anyone planting this variety in exposed positions or in badly drained land. As we have none too many good Pears in December, Glou Morceau is well worth growing for mid-winter supplies. My trees are on the Quince. The fruit from a few trees I had on the Pear was so poor in quality that they were not worth growing. On the Pear stock there is no lack of fruit, but it is too small and of poor quality. —G. W. S.

—This is one of our best winter Pears, and although in some places it is not of first-rate flavour, it must be classed amongst the most reliable. Its large size and fine appearance place it in the first rank of Pears for Christmas and onwards. It varies considerably in flavour according to the soil and situation in which it grows. On a cold, wet soil with a bad aspect it is often worthless from a dessert point of view, while on a soil of the opposite character it is frequently delicious. I had a large tree under my charge for eleven years. It grew in a light soil on a south wall on the Pear stock, and during those eleven years it scarcely ever missed a crop. I never had a badly flavoured fruit from this tree, the fruit being handsome and always of a russet appearance, which I have observed denotes the best flavour in this and most other fruits. It requires a warm situation to bring out its fine qualities. I have a tree growing in this garden on a warm wall above the roof of a low glass house, and this last year it gave me several dozen beautiful fruit, while on a wall with a cooler aspect Glou Morceau was indifferent in flavour. This Pear can be grown as an open bush tree, and in some soils it is satisfactory. In a garden where I once was there was a fine tree in this form, and I have seen from one to two bushels of well-developed, highly-flavoured Pears from it. —DORSET.

**Muscat of Alexandria and other Grapes.**—Although I have the highest respect for Mr. Iggulden's opinions and experience as a Grape grower, yet I must venture to contest his statement that Muscat of Alexandria is so delicate that it quickly becomes discoloured and is practically unsaleable, or at least unrepresentable, after it has been carried a little way or exposed for a short time. If that be so in his experience, how was it that the Muscat Grapes shown at the Crystal Palace last autumn were as good in appearance when the show was over as when first staged, enabling some of them to be exhibited elsewhere with success? Is this delicate character

thus ascribed to the berries borne out in the experience of other growers, and especially of exhibitors? All Grapes, white or black, need care in handling and in transit as well as in exposure, but I have never before heard of Muscat of Alexandria being so tender. Whether correct or not, the fact remains that even if somewhat more difficult to grow than most other whites, it is so delicious and generally excellent a Grape that no other white can compare with it. New white Grapes that are not one whit better than other inferior whites that have been raised are no gain whatever. When we can get a white Grape, that has the fine quality of the Muscat and the general excellence of the Black Hamburg, then we may have something to rejoice over. Till then the Muscat of Alexandria remains by far the best white Grape in cultivation. With respect to the flavour of Gros Colman, few growers will, I think, agree with Mr. Iggulden in holding that it is better flavoured than Black Alicante; also that the berries of the latter are mere bags of sugar and water. Gros Colman has the merit of being an easily grown Grape and producing the largest of berries, but it is one of the most difficult of all to properly colour. Its merit lies in the size of the berries and their fine appearance on the table. That may be with many an important recommendation, just as they like to see size in all fruits, irrespective of flavour.—A. D.

**Morello Cherries and stocks.**—In many gardens there is a difficulty with the Morello owing to loss of branches by canker and gumming, and in cases where it fails it is advantageous to get trees worked on different stocks. I found I did much better by having the trees on the Mahaleb. I am aware the use of this stock is greater than formerly, but in many cases I have traced losses, owing to the trees being worked on other stocks. In this country in cold clay or wet soils the stock named fails at times, but much may be done to make the soil suitable for the stock. In gardens where the Morello fails I have with advantage grown the Kentish Red. This will grow where the Morello fails, and the fruit is not inferior in quality. The Kentish Red grows freely in exposed places in cold soils and makes a free growth, but the foliage is small. The fruits are red, but if allowed to hang become dark coloured and acid, and are much liked for cooking. This variety makes an excellent pyramid or bush on the Mahaleb stock and soon attains a fruiting state. Independent of the question of stock is the way the trees are pruned. I fear pruning is often accountable for loss of trees. Some bush trees of the Morello that I planted nine years ago have not shown the least sign of gumming or canker, and they have had little pruning, only a little thinning out and stopping in the growing season. The trees in question were planted at the outset merely as an experiment. It is important that these bush trees be on the stock named. Slovenly worked trees should be avoided, as Cherries are the worst trees to gum at the union.—S. M.

**Grape Gros Colman.**—As a slight addition to Mr. Iggulden's excellent article on the above Grape, an article, by the way, which all, whether market or private growers, are likely to agree with, I should like to note the result of an inspection of a market-place not far from here where Grapes are well done, and where, from a very small beginning, the annual output must now be quite 15 tons. I was aware that the owner had a liking for Alicante, Lady Downe's, and Gros Maroc, and that circumstances had enabled him to try these as well as many others, but found house after house devoted to nothing but Gros Colman, and that a new range some 200 yards long was planted solely with this variety. I have seen rather larger bunches and berries, but for a fine even crop and splendid finish they could not well be beaten. A few Vines of Muscat of Alexandria and Cannon Hall in a warm house were carrying some good crops, the latter especially showing fine, well-finished berries, and I made the remark, "If you can do this Grape as well as this on a small scale, surely a house or two of it would pay well." The answer was de-

ciative. "I have tried nearly all Grapes, but nothing has yet been raised to touch Colman as a market Grape." Naturally a higher price is obtainable for the Muscats, but a comparison of the weights per rod, the firing and trouble of keeping, left the balance with Colman. So far as the other late black varieties were concerned, Lady Downe's was quite discarded, only a few Maroc remained, and the Alicante were half condemned. It has been a bad keeping season for Grapes unless facilities were to hand to maintain a dry warmth all through day and night, and in this matter Alicante and Lady Downe's are with me a bit better than Colman, but at the market-place noted the latter was said to keep plump and sound quite as long as any variety. As, however, most varieties vary as to their perfect development on different soils, so their keeping qualities are naturally influenced. Take the case of Alicante, that receives a deservedly high character from "J. C. B." on page 469. At its best and considering the ease with which it can be grown, it is a very valuable Grape with firm, sweet flesh. Try it, however, in another place and you get little more than a tough skin and water.—E. BURRELL, *Clarmont, Surrey.*

#### APPLE RIBSTON PIPPIN ON WALLS.

It would be worth while, even in the most favoured districts, to grow a few trees of this on walls if only to get some fruit of a different



*Apple Ribston Pippin on a wall facing west.  
From a photograph sent by Mr. W. Burstow,  
Florence Road, Brighton.*

character from that on espalier, standard or other trees. Unfortunately, the tree is prone to canker, and those who recommend planting it largely appear to forget that this Apple, though one of the finest, is one of the most capricious kinds as to soil and situation we have. In spite of all the care that can be bestowed on it, it is sure sooner or later to fall a victim to canker. Provided, however, there is a free outlet for surplus water and the soil is fairly warm and good, we imagine anyone may succeed in growing the Ribston to perfection. Double grafting, using as a stock a strong growing variety like Warner's King, is undoubtedly

effective. While advocating the growing of Ribston Pippin for home use, we fear that for market it is too uncertain. The trees may bloom very freely, but often only a moderate crop follows.

Mr. W. J. Burstow, 30, Florence Road, Brighton, who sent the photograph from which the illustration was prepared, says:—

The photograph I sent you was taken on August 30, and is of a Ribston Pippin cordon. It is growing on a wall facing west and is planted in a narrow border at the side of a lawn and has ordinary garden flowers in front.

#### WINTER GRAPES.

MR. IGGULDEN'S estimate of Gros Colman (p. 448) is certainly a commendable one, and when the high quality of those he has grown this year is taken into account, I think many would be found to support his views and envy the crop and conditions for producing it. It is a problem that has never been satisfactorily solved why perfect Grapes of this and other reputedly bad doers should be obtained in one garden and yet in another, under apparently better surroundings and provisions made for their growth, they completely defy all attempts at successful culture. There is no doubt but that the uncertainty of the Gros Colman to grow and colour satisfactorily is largely conducive to the bad reputation it bears. At the same time, were it as easily managed as the Alicante, it would be much more favourably reported on. I have known some cases where its condition year after year was so unsatisfactory, that it was cut out in despair and its place filled with other less fastidious varieties. This has reference to private gardens. Market growers who take less trouble in the construction of their borders, or make no border at all, invariably secure better results with this particular kind than many private growers, who go to the opposite extreme and provide nothing but the best material procurable to make their borders with. There appears to me to be some element needful for this particular Vine, or what should explain the reason why, when all others in a mixed house should do well, the Gros Colman languishes?

For this reason I should support Mr. Iggulden's views in the matter of a trial of Grapes at Chiswick. A trial would be no more conclusive at Chiswick than it would be in any other vineyard, nor would it furnish any particular lesson to the grower who had stubborn Vines and soil to deal with in his own garden. I presume Mr. Iggulden means dealing strictly with winter Grapes when he advises the weeding out of all such popular sorts as Alicante, Gros Maroc, Mrs. Pince, Mrs. Pearson, Golden Queen, Lady Hutt, and Alnwick Seedling. From an educational and exhibition point of view he will not meet with unanimous support in discarding these entirely at the expense of Gros Colman and Lady Downe's. It may be good advice to the market grower where this is needed, but in the private garden many owners take an interest in the growth and diversity of their crops, and to those who possess such an interest, surely no one would venture to deny them the pleasures variety affords.

Muscat of Alexandria stands absolutely without a rival, and it is unfortunate that from a mixed house it so frequently proves the reverse of satisfactory. If Golden Queen can be as easily grown as Alicante, it certainly deserves to be encouraged. In the winter, and indeed at any other period, black and white Grapes in separate dishes on the dinner-table are often desirable, and Mrs. Pearson or Golden Queen

would form an agreeable change to the Muscat of Alexandria.

"A. D." says Gros Colman is tolerated because of the size of its berries and weight it produces to the market grower, and for flavour ranks among the lowest. This may be true as regards the grower for market, but do not the quantities of that particular kind grown annually prove at the same time that it is favourably accepted by the consuming public—their patrons? It may be taken for certain that those who buy their Grapes like a combination of two qualities—good appearance and good flavour. In well-finished Colman this may be claimed sufficient, at any rate, to justify the purchase by the consumer, and this fact stimulates the market man to provide what to him appears to be just what his customers appreciate. If this were not so, Gros Colman would not have so large a sale in these advanced times. W. S.

**Apple Graham.**—I knew an Apple under this name when living in South Lincolnshire, but have not since met with it anywhere else. On looking through the fruit tree catalogues issued by the leading firms, I find it quoted in one only. It appears to be synonymous with Deux Ans. It is a valuable late kitchen Apple, as I have had fruits of it in excellent condition as late as May. The fruits grew from medium to large and were very regularly formed. The colour of the skin was a clear green with a faint flush on the sunny side, but on the cold clayey loam of South Lincolnshire the fruits could not be expected to put on a great deal of colour. It is very hardy and very prolific, the trees that I remember being generally heavily laden. For growing as a pyramid it is not suitable, as its habit is too spreading, but it makes a fine bush. It could be planted in the colder parts of the country on account of its hardiness and free-cropping proclivities.—A. W.

**Apple Striped Beaufin.**—This is a handsome Apple, and one worthy of extended cultivation. It is by no means a new kind, as it has been in cultivation for more than 100 years. It is more often met with growing as a standard in an orchard than as a garden tree, and I came across a tree of it a short time ago which, to judge by its appearance, could not be less than sixty years old. This, I think, is really the best way to grow it, as bush trees are a long time coming into bearing, the necessary restriction in this case seeming to retard instead of forward fruitfulness. No doubt if it could be allowed plenty of space to extend it might bear well when properly established as a bush. It would, therefore, be a good plan to make an allowance for this when planting if it is not convenient to grow it as a standard. This Apple should be in every collection, not only for the sake of its size and handsome appearance, but because of its good keeping qualities.—A. W.

**Strawberries.**—The best Strawberries grown here in light sandy soil are King of the Earlies, Vicomtesse H. de Thury, Royal Sovereign, President, Gunton Park, Eleanora, and Latest of All, ripening in the order named. Noble is a wonderful cropper and does well in this light soil, but the flavour is poor compared with that of the other varieties. My practice is to make new beds every fourth year on ground that has been heavily manured and deeply trenched for early Peas, which are cleared off and the Strawberries planted without digging the ground. I lay the runners into pieces of turf about 3 inches square and sink them down level with the soil, which prevents them drying up so much, and transplant as soon as they are well rooted, ramming them in as firmly as possible. I plant from the middle to the end of August, and never fail to get a good crop the next season. I make a new bed of King of the Earlies annually in a warm, sheltered quarter, planting the runners 1 foot apart. By so doing I

am able to gather fruit nearly a fortnight before the general crop comes in.—T. TYLER, *Grange, Warcham.*

## PARK AND WOODLAND.

### THE PROTECTION OF FORESTS.\*

THE evils most to be dreaded from the clearing of wooded heights are great risings of rivers and inundations, the reason being that forests exercise a regulating influence upon the flow of water. A rainfall on a bare slope meets with no obstacle to its rapid descent, and when the fall is abundant, as in storms, the mischief is very great, as the water rushing down with violence ploughs up the land, carries off the loam, which there is nothing to hold, and drags along with it pebbles and stones into the valleys below. Such torrents flood the low lands and leave the ascents dry and arid, but where the slopes are covered with wood such terrible effects of storms are not to be feared: the rain falls upon the trees and reaches the soil but slowly, the interlacing branches breaking the violence of the fall. The water drops through the interstices of the foliage as through a sieve; in part it runs along the branches on its way to the soil, where it meets with a carpet of Mosses and dead leafage, which act like a sponge, and instead of forming channels in the earth it is absorbed by it. The lower slopes retain only as much of the rain-water as is necessary to refresh them, and their pastures are always verdant, and the regions that are lowest are protected from inundation; the waters percolating through the soil reappear in the form of springs and the rising of the rivers is not to be dreaded.

The destruction of forests has been the cause of much mischief in a large area of the Rhone valley, especially in the departments of the Basses-Alpes and the Hautes-Alpes. The mountains throughout this region were formerly clothed with magnificent forests which have been little by little almost entirely destroyed, and this country, which was formerly fresh and rich in meadow lands, fertile and prosperous, has become an arid, dry, unproductive, uninhabitable desert. If the department of the Basses-Alpes still retains some shreds of its ancient forests, on the other hand, in the south and south-west there is no wood left, and almost all the loamy soil has disappeared at the same time. In the department of the Hautes-Alpes the whole of Dévoluy, the environs of Gap, the country which is between Gap and Embrun, is a spectacle of ruin and desolation—mountains denuded of grass and the bare rock seen everywhere. Owing to the want of sward or of roots to hold the soil, the torrents drag along with them periodically a considerable amount of mud into the plains, overthrowing everything in their way. The mountains have lost all their fertility; the springs have been dried up and the streams have all been turned into torrents. The number of these torrents has become for these departments the worst of all scourges. Dry during a part of the year, they form large beds full of detritus torn from the sides of the mountains, but in the rainy season, or after a storm, they are changed into rivers of muddy water which inundate the valleys and sometimes overwhelm whole villages. The terror which they inspire in the Hautes-Alpes is apparent in the names they bear. Thus there are the torrents Malaise, Malfosse, Malcombe, Malpas, Malatret, &c. Some bear the name Rabioux (mad);

\* Extract from an article by Gustave Regelsperger in *La Nouvelle Revue*.

several others that of Bramafam (howl-hunger), names that sound quite Dantesque, and savour of the "Inferno." The terror they inspire is quite justified. The Durance, for instance, which is the principal torrent in the region, and of which the flow is from 30 cubic yards to 40 cubic yards a second at low water, has been known to flow at the rate of 10,000 cubic yards in the greatest of its overflows. Its water is charged with mud, and sometimes has the aspect of a quagmire. In August, 1868, it was ascertained to contain mud at the rate of over a hundredweight to the cubic yard. Every year the Durance carries with it not less than 11,000,000 cubic yards of soil. As for the Rhone, it carries off every year to the sea 21,000,000 cubic yards of soil and detritus from the Alps. The whole of Camargue, extending to 65,000 hectares (160,550 acres), is formed of deposits of soil, mud, and slime, called in the locality the "flesh of the mountain." This vast alluvial plain goes on increasing in extent, to the detriment of the soil invaded; the delta encroaches annually on the Mediterranean at the rate of 50 yards or thereabouts. On the same sea-coast the river Var, according to the estimate of engineers, annually carries off 9,000,000 cubic yards of soil and detritus.

Here, it seems to us, are facts enough to dispense with giving other examples of the disasters that accompany the destruction of forests. But this is not all. It remains to be seen what becomes of the population of the devastated regions. The pastures being insufficient for the maintenance of their flocks, the herdsmen descend from the mountains and seek for subsistence elsewhere. Alike the cultivation of the soil has become impossible, because, on the one hand, the fields are threatened by the torrents and inundations, and, on the other, because the moisture is not retained by the soil, and at intervals drought parches up the plantations. The ruined populace seek a distant refuge from this desolate and infertile soil and the land is depopulated. "In these regions," says a writer, "the natural harmony of the terrestrial organisation is disturbed, the providential conditions of human life are annulled and destroyed. Man in ruining the forests ruins his own race; he commits suicide." And it is not only by emigration that the land loses its population, but the loss is partly to be sought in the deplorable hygienic conditions influencing the birth rate. Every census since 1871 reveals this same fact of the decrease of the population in the deforested departments. By the term deforested departments may be understood those thirty which are subject to the enactments of the law of 4th April, 1882, affecting the restoration and conservation of mountain lands. Between 1886 and 1891 these departments have been deprived of 89,682 souls in excess of the birth rate; whereas the fifty-seven other departments show an increase of 213,921 inhabitants. In 1892 the population of France underwent a total loss of 20,041 inhabitants, but the diminution was nine times greater in the thirty deforested departments than in the fifty-seven others. Deforestation, therefore, being proved to be the cause of depopulation in thirty departments is become a question of political hygiene of the highest importance. It is no new discovery of depopulation resulting from deforestation. Dalmatia, for example, which contained 2,000,000 inhabitants before its acquisition by the Venetians in the 15th century, being deforested by the latter in the interests of their navy, at the present day can boast of little over 500,000. Thus we see justified the saying of Chateaubriand: "The forests

preceded the peoples, the peoples go after them. Where the forest is, there is the fatherland."

Long ago farmers, engineers, and statesmen lifted up their voices in warning, but unfortunately they were not listened to. In 1840, Surell, an engineer, published a work on these alpine torrents, in which he showed that the primary cause of the formation, as well as of the enlargement, of torrents was to be sought in the deforestation of their basins. In 1846, on a report by the economist Blanqui to the Academy of Sciences on the deplorable condition of the French Alps, the Government seriously concerned itself with the reforestation of mountains. The first law on the subject was enacted in 1860 after the disastrous floods of 1856, but the resistance which it met with led to a new enactment in 1864, which authorised the substitution of turf-laying for reforestation. Finally, an enactment, dated April 4, 1882, placed the reforestation of mountain lands in the department of public works. The aim of this law is to prevent the washing away of the soil. This is in a direct ratio to the steepness of the slopes and the amount of water which is susceptible of being given off in the form of torrents. The first thing, therefore, to be done is the suppression of existing torrents and their conversion into harmless and useful streams; and the second is to prevent the undermining of the soil and formation of new torrents, or the re-suscitation of extinct torrents. These results are obtained by reforestation.

About 1,200,000 hectares (some 3,000,000 acres) are the extent of the mountainous regions of France, which thirty years ago were still wooded, and now no longer so, thanks to human activity. A third of this surface is now set apart for public works in course of execution at the public expense. Of the remainder, 70,000 hectares have been planted with trees, and 230,000 are represented by pasture lands capable of being restored, which leaves 500,000 hectares as the extent still to be dealt with. The work which remains to be done is therefore considerable. Under the enactment of 1882 the State is authorised to make subventions to proprietors as aids to replanting denuded mountain lands. These subventions, unfortunately, have been insufficient.

## STOVE AND GREENHOUSE.

### CHAMÆROPS FORTUNEI IN HANTS.

I CANNOT say when the Chamærops here figured was planted, but it has stood a number of years without any protection. The aspect is east or south-east on terrace, and planted about 20 feet from the house, by which it is a good deal sheltered. It is 23 feet from ground to tip of centre leaf, and was very beautiful when in bloom at the latter end of May and June with its numerous racemes or branches of drooping golden yellow flowers. H. H.

**Acacia urophylla.**—Nearly the whole of the greenhouse Acacias flower during the spring months, but there are a few exceptions, as the singular *A. platyptera* is usually studded with its golden blossoms during October or November. Following on the heels of this comes the more uncommon *A. urophylla*, known also as *A. smilacifolia*. This latter name is derived from the great resemblance between the phyllodes of this *Acacia* and the leaves of some species of *Smilax*. Like the majority of the Acacias, the flower-heads of this are globular, and in colour pale creamy yellow. Though decidedly less showy than many of

the occupants of our greenhouses even at this season, *A. urophylla* nevertheless affords a pleasing variety.—H. P.

**Nerine Manselli.**—Earlier in the season we have many beautiful species or varieties of *Nerine* in bloom, including the brilliant *N. Fothergilli*, and even now with the advent of December they are not quite over, for *N. Manselli* and *N. undulata* are still in flower. *N. Manselli* is by far the more showy of the two; the flowers, which are borne in good-sized heads, are of a coral-pink when first opened, after which they deepen in colour a little. The segments of this are broad, thus forming a full flower. *N. Manselli* is of hybrid origin and was raised, I believe, by Mr. O'Brien when with Messrs. Henderson. In growing *Nerines*, thorough drainage must be given, and a compost consisting principally of good yellow loam (lightened when necessary with sand) should be used, as this will keep fresh and sweet for years, thus obviating frequent disturbance of the roots, which is apt to hinder the flowering of these bulbous plants. Failures in their culture may be traced to this, or to the fact, sometimes overlooked, that their period of growth is during the winter months, when by some they are kept dry, which is the worst possible treatment they



*Chamærops Fortunei* (*C. excelsa*) in the gardens at Efford Park, Lymington.

can then receive. A good light position in the greenhouse, where the leaves will develop without becoming drawn, is the best place for these *Nerines* in the winter.—H. P.

**Camellia Sasanqua.**—This pretty little *Camellia*, represented though very sparingly in our gardens by several forms, is, under similar conditions to *C. japonica*, flowering freely, being thus much earlier in bloom than its larger relative. It is certainly a very useful flowering shrub for the greenhouse, and the fact that it is almost hardy is another point in its favour. *Camellia Sasanqua* is one of the many plants that, though introduced years ago, had almost dropped out of cultivation. Beside the varieties with single and semi-double flowers of different tints, there is one in which the leaves are marked with white, and when in good condition this is certainly a pretty variegated-leaved shrub. *C. Sasanqua* and its several forms are usually propagated by grafting, but I find that the comparatively slender shoots of this kind strike root much more readily if put in as cuttings than those of its more vigorous relative, *C. japonica*.—H. P.

## THE PERUVIAN HELIOTROPE AND THE GIANT HELIOTROPES (LEMOINE).

I do not suppose there are many more popular plants, or which produce flowers whose perfume stands higher in general estimation than the Peruvian *Heliotrope*. The perfume is, in fact, exquisitely fine, and has been compared with reason to the aroma of the *Vanilla* fruit. Indeed, so close is the resemblance between the two perfumes that it is very frequent to hear people say, "I have a *Vanilla* plant," when all the time it is a *Heliotrope* they possess. Delicate though it is, this perfume is so subtle that, breathed for a length of time in a close room, it produces the sensations of a mild intoxication. The plant itself is elegant in its carriage, and its gracefulness is such that it is well adapted for growing in pots for market. Ever since it was first brought from Peru in 1757, it has been used in the adornment of conservatories and gardens, where its bloom remains with us until the approach of the first frosts. In the open air under Parisian skies its stems and branches are cut down by the first autumn frosts, but in the conservatory its vitality is such that it attains to a great size. By sowing the seeds of *H. peruvianum* some varieties have been obtained which differ from the type in having more ample foliage, and in the wealth, the size, and the colour of the flowers. In some of the varieties, too, the perfume of the flowers is more penetrating even than that of the type. The colour which predominates in all the varieties of *H. peruvianum* is a violet more or less pronounced, but some varieties bear white blooms. Sometimes the leaves, the stems, and the branches bear the imprint of the greater or less intensity of colour of the flowers. Thus the varieties which have the flowers of a deep violet have the branches and foliage equally pronounced in colour.

The giant *Heliotropes* (Lemoine) were scarcely known ten years ago. They owe their existence to crossing the finest varieties of *H. peruvianum* and *H. incanum*. This latter is a Brazilian species introduced to Europe by William Bull, of London, and differs considerably from *H. peruvianum* in stature and general character. It is of some height, and possesses large, vigorous branches and leaves covered with down. The leaves are a grey green in colour, and the flowers bluish and insignificant; it is not very ornamental. M. Victor Lemoine and Son, of Nancy, conceived the idea of crossing some of the finest varieties of *H. peruvianum* with *H. incanum*, with the result that they obtained some hybrids, which they set aside and multiplied for some years. They soon found that the plants were unfitted for cultivation in pots, and gradually they gave up the varieties named and limited their efforts to the multiplication from seed of all the varieties without distinction. The plants they obtained in this way are truly remarkable; they vary in stature from 15 inches to 3 feet. The inflorescences are borne on vigorous branches in the form of corymbs, a mass of flowers on the same level sometimes as much as 15½ inches in diameter.

Notwithstanding the inequality in height which is met with sometimes in plants of the same sowing, the general effect of these plants, whether in baskets or in beds in the sun, is really magnificent. The colours of the flowers are not too varied, and blue, rose-lilac, pearl grey, metallic blue, and sometimes but not frequently rose, are the ones most commonly met with in plants produced from seed.—J. FOUSSAT, in *Le Jardin*.

**Azalea calyciflora.**—If gently forced year after year this pretty little *Azalea* acquires quite an early flowering habit, so that it may without any trouble be had in bloom by the latter part of November. *A. calyciflora* derives its name from the enlarged calyx segments, which are of a bright salmon-red with a distinct orange shade, the same as the rest of the flower; hence in this kind the blooms are of quite a hose-in-hose formation. Although this same feature occurs in *A. amena*, it is wanting in *A. obtusa*, whose flowers

are quite single, though in colour they are much in the way of those of *A. calycellora*. There is a distinct variety of *A. obtusa*, in which the blooms are pure white, or occasionally striped with red. *A. amena* is well known both as a shrub in the open ground and as one for flowering under glass, where it can be had as early in the season as those previously mentioned. A variety of this—Caldwelli—has blossoms as large again as those of the normal form. These smaller-flowered Azaleas are all remarkably free blooming, and apart from their individual beauty they afford a pleasing change from the different varieties of the Indian section. All the Azaleas of this group are far more pleasing when struck from cuttings and allowed to assume their natural shape of much-branched bushes than when grafted on to a naked stem, as is so often done.—T.

**Malmaison Carnations.**—"J. C. B." will be interested to learn that several of the large houses of the above to which I referred in a recent issue were exclusively given up to these plants all the year round. For some time the plants were a success, but eventually the disease overtook them wholesale. These plants were never taken outside, and prior to this I suggested in one instance sulphuring the plants before removal from the house, and thus endeavouring to kill any disease germs that might be about. In many cases the plants were grown on into good-sized pots, and when layering became a necessity this was carried out on the side beds under glass. I mention this to show that with every precaution that could be thought of no cure was effected, nor was the disease in any degree lessened. From repeated trials, however, I am convinced that in certain low-lying districts no treatment will keep the plants long healthy. Some splendid plants purposely purchased in Guernsey for a fresh trial, apparently absolutely clean and healthy, were potted and placed in a cool, airy house at once. In less than two months these plants were badly diseased, yet they had never been watered overhead and only twice at the root, it being late autumn before the disease was rampant.—E. J.

**Arranging plants.**—It is surprising what a lot of money is spent upon elaborate stages and benches in conservatories and show houses generally that would have been much better left alone. A very large percentage of the plants we grow for flowering or for the sake of their foliage looks much nicer when viewed from above than when they are on a level with the eye. There are many Palms and large Ferns, it is true, that require to have their heads high to catch the outline of the stems and fronds, but as often as not the trouble with these is to keep them away from the glass, and it is a simple matter to raise any individual plants that need it, and hide whatever is used for supports with dwarfier subjects. In the *Chrysanthemum* season, for instance, scores of gardeners have wished their stages were movable, and in a greater or less degree the same thing occurs all the year round. On a flat floor beautiful little groups of various plants may be made; the outline of each may be varied and any favourite idea of arrangement carried out, but with a straight rectangular stage for a start there is often little chance for artistic display, and more often than not visitors can see principally the lower part of the flower or the back of fine-foliaged plants, as the case may be. Stages are of course necessary in the growing quarters, but where we have to show the plants they do usually more harm than good.—H.

#### SHORT NOTES.—STOVE & GREENHOUSE.

**Rhynchospermum jasminoides.**—This is a useful old greenhouse plant for growing up pillars, &c. The pure white blooms are well adapted for filling small vases, or bunching in the same way as Violets, as they are very sweet scented and last a long time in water. Some twenty-five years ago this plant was largely grown.—DORSET.

**Geranium Lady Plymouth.**—This is one of the best sweet scented-leaved forms, and a most useful kind when grown in pots to stand in vases in rooms

during the winter. When grown in pots through the summer, exposed in the open, and well fed, it is a most valuable plant in winter. I have some nice plants now (December) grown in this way.—DORSET.

#### THE FRUIT TRADE.\*

I PURPOSE contrasting the fruit trade at the present day with what it was in the memory of many of us forty or fifty years ago. The chief cause that has led to its development has been railway and steamship communication. Fifty years ago the only supply was home-grown and of limited extent, the carriage from a distance to any of the local centres being difficult and expensive. The importation of foreign fruit, with the exception of Oranges and Nuts, was also on a reduced scale, irregular and uncertain. Occasionally a few hundred barrels were sent from America in sailing vessels by private individuals, and the trade in fresh produce, with the exception of a few Pears grown in Normandy and Brittany, was exceedingly small. The prices that had to be paid for fruit put it out of the reach of all but the well-to-do, except in the months of June, July, August, and September, when our home fruits were found in all the markets in the immediate vicinity of the centres of production. I am quite safe in saying that during eight months of the year fruit to the multitude was practically an unattainable luxury, except when Oranges happened to be plentiful. The districts whence Oranges came to this market were St. Michaels and Lisbon. They were sent in sailing ships, which were at the mercy of the winds, and it was no uncommon occurrence for the London market to be without Oranges for two or three weeks. I can well remember often seeing a fleet of ten or twelve sailing vessels moored outside the wharf at London Bridge. Since that time the south of Spain has taken to growing Oranges, and I can call to mind the first few boxes of Valencia's that arrived in Covent Garden Market. They were packed and owned by Robt. McAndrews and Co., who were then the great people in the St. Michael trade. In the first season certainly not more than 200 cases came to Great Britain, and in contrast with this, I may mention that last year the growth in the province of Valencia alone exceeded three and a half million cases. The cultivation has increased to such an extent, that a box of Oranges can now be bought in the months of November, December, and January at a price not exceeding 6s. f.o.b. Valencia, and throughout the season they are being sold here in Great Britain at as low a price as in the towns of Spain where they are produced. Oranges are now being grown in a new district, the province of Murcia; they promise to surpass in quantity, as they certainly do in quality, those of the province of Valencia. The Canaries also are in the field, and whereas six or seven years ago a supply of 200 or 300 boxes during the season was all that was produced, I hear on good authority that last year 50000 boxes were shipped, and that this year the output is more than double. These Oranges, which are of exceptional quality, will have to compete with those from Jamaica, Florida, and California. Florida Oranges occupy a pre-eminent position both in America and here. The frost some seven years ago nearly killed all the trees, and this will be the first season that there has been any crop to speak of. As regards California, the fruit is cultivated there with the greatest

\* Paper read by Mr. M. J. Garcia (of Garcia, Jacobs and Co., London, and Simons, Jacobs and Co., Glasgow) before the Horticultural Club on Tuesday, December 14.

care under the most favourable conditions, and it is only a question of time for it to supplant all the rest grown in America. St. Michaels Oranges, on the other hand, have deteriorated, so much so, that all the trees have been cut down and Pine-apples planted instead. Palestine and Mexico are also now in the field with Oranges, and it is probable that the growth in Jaffa will attain such large proportions as to form a serious opposition to the best fruit that comes from either America or Spain. Efforts have been made to introduce Jamaican fruit, but up to the present with very disastrous results, the loss of one company alone being at least £34,000. The money, however, has not been thrown away, as great experience has been gained, and hopes are yet entertained of the mother country being able to assist in the consumption of the fruit of one of her colonies that has suffered most severely through the failure of sugar not being remunerative. As regards Pines, they are in St. Michaels grown under glass, and are of exceptional quality and size. The average weight is from 2 lbs. to 8 lbs. They are nearly all of the Smooth-leaved Cayenne variety, and I am quite within the mark when I state that there are brought to London each year between 400,000 and 500,000 Pines. These, on account of their size and quality, have entirely supplanted the English growth. Canada is fully alive to the consumption of foreign fruit in England, and the Canadian Government have organised a department for the development of the trade. Cool chambers have been fitted up in the regular steamship lines to London, Liverpool, Bristol, and Glasgow, and the consignments that have arrived this season lead us to hope, now that America is practically closed to British fruit, that we shall be able to assist Canada by being customers for all kinds of her produce. Turning now to

#### ENGLISH FRUIT.

the production fifty years ago was very small, except in the months of June, July, August and September. Hot-house Grapes commenced at about 30s. per lb., and the lowest price, unless in unusual circumstances, was 2s. per lb. The month of November brought us to the end of English hot-house Grapes, and I can well remember when my grandfather, who lived in the Poultry, in Cheapside, had an order for Grapes for the Lord Mayor's dinner, the only person that could supply them was Mr. Crawshaw, of Colney Hatch, and this gentleman used to allow 50 lbs. to be cut specially for this purpose. I have myself sold common Lisbon black Grapes in March at 30s. a lb. The only others that were then obtainable were a few from Almeria, and of these the supply was limited, the average quantity being about 30,000 to 40,000 barrels, and the price 20s. to 60s. a barrel. At the present time the average supply of this one variety is about half a million barrels, and they realise from 8s. to 20s. The cultivation of Grapes and Tomatoes under glass is a matter that you are better acquainted with than I am; but if the amount of care given to this particular branch had been devoted to the growth of Apples and Pears in England, I cannot help thinking that the trade in the latter would be much more profitable than it is to-day. French fruit, with the exception of Pears, was almost unknown fifty years ago, but now the demand is so great, that the cultivation in the south, where Cherries and Green Gages are grown, has been increased solely on account of the consumption in Great Britain. The quantity consumed in Great Britain is extraordinary, and although prices may seem dear, the freight in France is so high as almost to preclude anyone,

with the exception of the French railway companies, from making a profit. The French Government, which has the monopoly of the railway system, throws all sorts of obstacles in the way of the carriage of fruit by fast French trains; and although these are no quicker than our ordinary luggage trains, the freight is higher than any of our railway companies charge for conveyance of similar goods by express. All fruit that reaches us from the south of France is charged at the rate of 1½d. to 1¾d. per lb. Chiefly English capital is now used in the development of this trade, and the largest firm in France, when desirous of turning their business into a limited liability company, had to come to England to obtain the capital necessary. I have left to the last the consideration of the enormous strides made in the

#### AMERICAN APPLE TRADE.

The result to the farmers in America always depends on the crop we have in the United Kingdom, and every year they are as anxious to obtain information as to the outlook here as we are to learn of the prospects on the other side. The business, which commenced by the shipment of a few hundred barrels fifty years ago, has now assumed gigantic proportions. In 1880 there were about 1¼ million barrels shipped from America; for the next eight years the number varied from 81,000 to 800,000, while last year, when the crop was beyond all precedent, over 3,000,000 barrels were sent to Great Britain. This season the crop in general is poor throughout America. In the States the carriage of fruit is evidently much less expensive than here. The bulk that is now arriving is being shipped 2000 miles west of New York at a cost per barrel that certainly does not exceed 15s. to 16s., everything included. If England is to compete with foreign countries, she will have to adopt methods similar to those in use in the country which has made a speciality of the growth of produce for foreign markets. California has certainly set an example as regards trouble taken in the growth of fruit and in the development of the trade, and there are one or two facts which have come to my knowledge from reliable people which I may venture to place before you. Fruit-growing in America is a very important business, and the Government spares no pains in acquiring all possible information on the subject, distributing it in pamphlet form broadcast to all those who are directly or indirectly interested in agriculture. Fruit trees in California, as well as throughout America, are planted at a distance of 24 feet apart, and it has been ascertained from many years' experience that the trees bear more fruit and of better quality in this way than if planted closer. Except during the first few years, no grass or other vegetation is allowed to grow between the trees, and all that Nature and science can do is brought to bear on their development. Some Californian gentlemen have devoted themselves to the culture of fruit in other countries, and one of the most influential has established himself in Cape Colony, 250,000 trees having been sent there four years ago, and this year some of the first produce will reach England. They have decided to send not only to their own, but also to the English markets, and they hope that in a few years, Pears, Plums and Apples, equal to the best grown in California, will be shipped to arrive here during the months of April, May, and June. On one farm alone 90,000 fruit trees were planted last year.

I certainly think that, as regards the production of Apples in England, the nurserymen are

to some extent to blame for advocating the growth of new sorts, for, as I have already said, the old kinds of good eating quality sell well, while, on the other hand, many of the new varieties are difficult to dispose of and less profitable. The same system that exists in America should be followed here, namely, particular attention should be paid to the cultivation of well-known varieties, so that dealers here will be able during the season to depend on a good supply of particular sorts, such as King of the Pippins, Blenheim, Cox's Orange Pippin and others equally appreciated by the British public. Although the production of English soft fruit has increased in proportion to the population, foreign has not caused it to depreciate in value as thirty to forty years ago. Cherries, Plums, Currants, &c., in plentiful seasons were sold at lower prices than under similar conditions at the present day. Thirty-five years since Bigarreau Cherries were sold as low as 5s. to 7s. per bushel of 48 lbs., a figure hardly ever experienced in the present day, while 2d. per lb. for Black Currants was considered a high price.

## SOCIETIES AND EXHIBITIONS.

### ROYAL HORTICULTURAL SOCIETY.

DECEMBER 14.

THIS, the last meeting of the current year, was a remarkably good one, the display of flowering plants, if not of the most extensive character, being a brilliant one. The weather, too, had its share in rendering the meeting brighter and more cheerful than the recent gatherings have been. The attendance was good and the committees were well represented. The greater part of the work fell upon the Orchid committee, as the following list of awards will indicate, the immediate work of the floral committee being light, and that of the fruit and vegetable committee not of a laborious character. The competition for the "Veitch" flavour prizes for Pears and Apples was very keenly contested, the best known sorts for flavour still holding their own.

Of Orchids, the meeting was almost a record one in respect to hybrid Calanthes, in which the prevailing affinity to that grand and useful hybrid *C. Veitchi* was singularly noticeable. The colours of these newer forms were very rich, making quite a show of themselves. Most of these were from the Burford Lodge collection. The major portion of these examples, it was noted, was grown in loam. *Cypripediums* were present in quantity, notably the many fine forms of *Cypripedium insigne* amongst the species, and *C. Leeanum* of the hybrids. Hybrids of other genera were also notably in evidence, more especially in Messrs. Veitch's collection. The groups of *Poinsettias* and *Begonia Gloire de Sceaux* from Isleworth call for special notice, and so does the group of late-flowering *Chrysanthemums* from Groombridge. These all being excellent examples of seasonable decorative plants, some idea could be formed of what can be done for the Christmas supply. Cut *Chrysanthemums* from Ryecroft were present in good numbers, affording useful information as regards the best late kinds. The floral committee, as will be noted, only recommended one award of merit at this meeting, but that in itself was a most worthy one, bearing evidence of what may be accomplished by persistent efforts in the field of hybridisation. The fruit committee had a highly creditable exhibit of Apples from across the border and another from the west country, whilst from Farnham came a splendid exhibit of Selected Conqueror Tomato, these being ideal fruits for kitchen use at this season.

#### Orchid Committee.

A first-class certificate was awarded to—*CALANTHE HARRISI*, a distinct and lovely hybrid. The sepals and petals are pure white, of

fine form and substance, the lip upwards of 1½ inches across, very round, and without the usual keel at the base, pure white with the exception of a little yellow on the disc. It is the result of crossing *C. vestita Turneri* with *C. Veitchi*, and was raised by the late Dr. Harris. From Mr. J. T. Bennett-Poë.

Awards of merit were given to the following:—

*TRICHOPILO BREVIS*.—This is a lovely form, the sepals and petals rich brown, mottled and tipped with bright yellow, the large lip pure white, becoming suffused with yellow in the centre, which deepens at the base. A fine plant with two flowers was exhibited by Sir F. Wigan, Clare Lawn, East Sheen.

*LÆLIA BRISSEI* is the result of crossing *L. harpophylla* and *L. purpurata*. It partakes of the habit and general characteristics of *L. harpophylla*. The sepals and petals are white, suffused with yellow, the lip white on the front lobe with some purple in the centre; the side lobes pure white, with pale yellow at the base. From Mr. J. Douglas, Great Bookham.

*LÆLIA ANCEPS MRS. DE B. CRAWSHAY*.—A grand form of the dark section of this well-known species, the sepals and petals being of fine form and substance, the front lobe of the lip very dark. From Mr. De B. Crawshay.

*LÆLIA PRÆSTANS SUPERBA*.—In this the sepals and petals are of fine form and substance, deep rose in colour, the front lobe of the lip rich crimson-purple with a white spot on the disc, the throat rose, shading to yellow at the base. From Mr. R. W. Richards.

*LÆLIA RUBESCENS*.—In this, better known as *L. acuminata*, the sepals and petals are pale rose, the lip deep rose in front, shading to white in the centre, the side lobes rose, shading to maroon at the base. The flowers are produced on erect spikes 18 in. or more in length. From Sir T. Lawrence and Mr. W. C. Walker.

*CALANTHE SANGUINARIA*.—One of the darkest forms we have seen, the sepals and petals deep red with a little white at the tips of the lower sepals; the lip is similar in colour to the petals and has a deep red blotch at the disc. From Sir T. Lawrence.

*CALANTHE BURFORDIENSIS*.—A grand dark, free-flowering variety, the result of crossing *C. Veitchi* and *C. sanguinaria*. It is a desirable variety, combining both in shape and colour the two parents. From Sir T. Lawrence.

*CALANTHE VEITCHI SPLENDENS*.—A lovely form of this well-known Orchid. It has a compact habit with the free-flowering qualities of the type. From Sir T. Lawrence.

*LÆLIA LINDLEYANO - ELEGANS*.—This is a remarkable combination, being the result of a cross between the natural hybrid *Brassio-Lælia Lindleyana* and *Lælio-Cattleya elegans*. The sepals and petals are greenish-white suffused with rose at the base, the lip rich crimson-purple in front, becoming lighter at the base, the side lobes white shading to purple at the base. The flowers are produced on a raceme 15 inches in length. From Sir T. Lawrence.

*CYPRIPEDIUM ESON VAR. GIGANTEUM (C. insigne × C. Druryi)*.—This is a lovely hybrid in which both species are combined. The dorsal sepal is white at the top, shading to green and thickly spotted with brown on the lower half, the broad petals greenish yellow, suffused with brown, having a few spots at the base; the lip is very broad, yellow, heavily suffused with brown, the whole being highly polished. It is a remarkably bold flower. From Messrs. J. Veitch and Sons.

Messrs. J. Veitch and Sons sent a choice, but interesting group, prominent in this being two fine plants of the secondary hybrid *Cattleya leucoglossa (C. Fausta × C. Loddigesi)*: the sepals and petals pale rose, the lip lighter than the sepals, heavily veined on the front lobe with purple and much crisped on the edges, the side lobes creamy white, shading to yellow at the base, lined with purple at the base. It is a free-flowering and desirable variety. *C. Mantini* and *Lælio-Cattleya Pallas* were also well represented. Amongst the *Cypripediums*, the most prominent were good forms of *C. Adrastus*, numerous fine forms of

C. Lecanum, a grand variety of C. Niobe, and a finely-flowered C. Sedeni candidulum. A silver Flora medal was awarded. Messrs. H. Low and Co. were awarded a silver Banksian medal for a choice and interesting group consisting of finely-flowered *Lælia anceps*, good varieties of *Cattleya Percivaliana*, a nice plant of *Cymbidium Winnianum*, *Dendrobium splendidissimum*, and a finely-flowered *D. Cassiope*. Amongst the numerous *Cypripediums* were a fine form of C. *Miosa*, C. *insigne* Laura Kimball, C. *Pitcherianum* (Williams' var.), C. *Sallieri* Hyceanum, and grand forms of C. *Lecanum*. *Angracum sesquipedale* and *Cycloches Lowi*, a pretty variety with a large bright rose lip, were also included. Messrs. B. S. Williams and Son sent a large group, consisting principally of finely-flowered *Cypripediums*, several finely-flowered *Calanthe Veitchii alba*, good forms of *Lycaste Skinneri*, finely-flowered *Oncidium*s and *Zygopetalum*s in variety. A silver Banksian medal was awarded. Messrs. F. Sander and Co. sent a group consisting of hybrid *Calanthes*, which had a pleasing effect arranged with *Dracena Godseffiana*. Messrs. Paul and Son, The Old Nurseries, Cheshunt, sent ten made-up baskets of *Cypripediums* in such varieties as C. *Spicerianum*, C. *Harrisianum*, C. *Ashburtonæ*, and various forms of C. *insigne*.

Sir T. Lawrence sent a large and interesting group consisting principally of *Calanthes* in variety, the most striking amongst them being the delicate rose-coloured C. *Victoria Regina*. C. *versicolor*, white with a pink centre, was also attractive. Amongst the other species of *Orchids* were fine forms of *Masdevallia irrorata*, *Miltonia Endresi*, a finely-flowered plant of *Platyclinis uncinata* and numerous fine hybrid *Cypripediums*. A silver-gilt Flora medal was awarded. Mr. W. C. Walker sent a grand variety of *Lælia alba bellii* with fourteen flowers on the spike. Sir F. Wigan sent *Cypripedium insigne* (Wigan's variety), a distinct form of the montanum section. Mr. C. J. Lucas, Warnham Court, sent *Lælia anceps Schrederiana*, a distinct form in the way of L. a. *Amesiana*. Mr. M. S. Cook, Kingston Hill, sent two good forms of *Oncidium crispum*. Mr. W. Cobb, Dulcote, Tunbridge Wells, sent *Cypripedium J. Howes* with four flowers and a form of C. *Lecanum*. Mr. T. McMeekin sent *Cypripedium insigne* (Falkland Park variety) and C. Mrs. G. Botterill (C. *Lathamianum* × C. *Savageanum superbum*). Mr. F. W. Moore, Glasnevin, sent *Cypripedium insigne*, a good form and a yellow variety of that species in the way of C. *insigne Ernesti*, *Vanda lamellata Boxalli*, *Maxillaria punctata*, M. *mirabilis* and *Oncidium saltabundum*, for which a botanical certificate was awarded.

#### Floral Committee.

An award of merit was made in favour of

**BEGONIA WINTER CHEEK** (winter-flowering tuberous section), the name chosen for which could not have been more appropriate. The plants bore a profusion of flowers, each from 2½ inches to 3 inches across, these possessing great substance and singularly persistent qualities as contrasted with the majority of the summer flowering section. The colour is a bright rosy carmine, the flowers semi-double, the trusses large and almost erect with the additional advantage of stout foot-stalks. It is of similar habit to B. *Julius*, to which the same award was made at the last meeting, and, like that hybrid, is the result of crossing B. *socotrana* with a tuberous variety. From Messrs. J. Veitch and Sons, Royal Exotic Nursery, King's Road, Chelsea.

Mr. H. J. Jones, Rycroft Nurseries, Lewisham, staged an exhibit of cut *Chrysanthemums* similar to that shown by him at the last meeting, but on a much smaller scale. The blooms were of excellent quality and in very fresh condition. Some of the best varieties shown were *Oceana*, *Geo. Seward*, *Golden Gate*, *Mme. Carnot*, and *Khama*. The arrangement was carried out with great taste (silver Flora medal). Mr. J. W. Temple, Groombridge (gardener, Mr. F. Cubberly) sent a large group of *Chrysanthemums* in pots, all the plants being in excellent condition.

Considering the lateness of the season, the blooms were of good size and colour and very freely produced (silver Flora medal). Messrs. Cannell and Sons, Swanley, Kent, staged a large collection of cut zonal *Pelargoniums* arranged in bunches, with a background of Fern, making a gorgeous bank of colour. The most striking of the newer varieties were Lord Tennyson, with brilliant rose-pink flowers of good size; Dryden, vivid salmon, shading to white, and having smaller flowers; Lord Reay, deep purple and crimson, very rich; Crabbe, soft but bright salmon-pink; Shelley, vivid crimson; Comtesse de Morella, a pretty scarlet and white; Mrs. W. Partridge, light and delicately shaded salmon-pink; Mr. W. E. Corden, bright scarlet; and Duchess of Marlborough, rose-pink and white (silver Banksian medal). Messrs. Hugh Low and Co., Enfield, sent *Cyclamens* and their new *Carnation* Winter Scarlet. The *Cyclamens* were good, bushy plants, with large and handsome blooms thrown well above the foliage. The dark crimson and white varieties were the best. Messrs. Cutbush and Son were awarded a silver Banksian medal for a collection of double *Primulas*, the varieties shown being Princess, white, faintly tinged with lilac, and Marchioness of Exeter, rose-pink. The plants were somewhat straggling and thin in growth, but the flowers were pretty and freely produced (silver Banksian medal). A group of *Poinsettias*, excellently grown and with good full heads of bracts, was shown by Mr. A. Pears, Spring Grove, Isleworth (gardener, Mr. Farr). The foliage was particularly fresh and clean. From the same exhibitor came a group of very handsome plants of *Begonia Gloire de Sceaux*. The delicate pink blossoms, freely produced among the rich and glossy foliage, had a very pleasing effect. For these two groups a silver Banksian medal was awarded.

#### Fruit Committee.

Awards of merit were given to—

**PEAR PRESIDENT BARABE**.—This is a medium-sized fruit, turbinate in shape, skin yellow, much covered with russet, stalk short and thick, and flesh melting. It is a delicious mid-winter Pear and a valuable addition at this season. From Mr. Allan, gardener to Lord Suffield, Gunton Park Garden, Norwich.

**CELERY SUTTON'S SOLID WHITE**.—This was grown at the society's gardens, Chiswick, from seed sent by Messrs. Sutton, Reading. It is a beautiful medium-sized Celery, very solid, remarkably sweet, and free of pith. Messrs. Sutton and Sons, Reading.

Messrs. Berwick, Sidmouth, Devon, staged fifty-six dishes of Apples notable for their splendid colour, the dessert fruits being very fine and splendidly coloured. The cooking varieties were in a few instances past their best. Hornead's Pearmain, Ribston, Cox's Orange, Tyler's Kernel, Stone's, Alfriston, Lady Henniker, Cellini, Bismarck, Golden Noble, and Newton Wonder were the best (silver Knightian medal). Mr. Day, Galloway House, Carlisle, N.B., sent some sixteen dishes of Apples. The Apples were excellent for the locality. Of the kitchen kinds, Lane's Prince Albert, Warner's King, Bramley's Seedling, Mère de Ménage, Peasgood's Nonsuch, Golden Noble, and Blenheim were excellent, while of the dessert kinds the best were King of the Pippins, Mannington Pearmain, Fearn's Pippin, and James Grieve. Mr. Day also showed a handsome dish of Onion Ailsa Craig from seed sown on February 25 of the present year (silver Banksian medal). Mr. Mortimer, Swiss Nursery, Farnham, staged twelve large boxes of *Corqueor* Tomato, excellent fruits for mid-December, well meriting the silver Banksian medal awarded. Sir Trevor Lawrence (gardener, Mr. Bain) sent grand roots of *Celeriac* Smooth Prague, called in France *Geant de Prague*. This is a very large, smooth root of great excellence, and well worth extended culture in this country. A small yellow-topped variety was also shown named *a Feuille Panachee*, useful for salads, as the tops can be utilised and need no blanching. *Couve Tren-*

*chuda*, or *Seakale Cabbage*, was also sent. This was very fine. Caroons were shown by Miss Breton. Celery Jubilee Red, a cut-leaved variety, from Mr. Outram, Fulham, S.W., is very distinct, and Cucumber All the Year Round came from Mr. O. Thomas, Royal Gardens, Frogmore. Celery Victoria Pink came from Mr. T. Cross, Bury St. Edmunds. This the committee wished to be tried at Chiswick.

The Veitch prizes for flavour brought out a strong competition, no less than twenty dishes of Apples and fourteen dishes of Pears being shown. The first prize for Pears went to Mr. Allan, Gunton Park, for President Barabe, the new variety, given an award of merit, Mr. Wythes, Syon House, Brentford, being second with Winter Nelis, also of excellent flavour. Few fruits are superior to this in December, but it lacks size. The other varieties shown were *Josephine de Malines*, *Nouvelle Fulvie*, *Bourré Buisson*, and *Glou Moreceau*. For Apples, Mr. Herrin, Dropmore, was first with nice fruits of Adams' Pearmain, and Mr. Ross, Welford Park, Newbury, second with Cockle Pippin, the other varieties shown being Ribston, Cox's Orange, Blenheim Orange, Claygate Pearmain, Fearn's, Lemon, and King of the Pippins.

#### NATIONAL CHRYSANTHEMUM SOCIETY.

The floral committee of this society held their last meeting of the present season on Monday afternoon last at 3 o'clock. On this occasion there was not a single exhibit of *Chrysanthemums*, this experience being almost unique, if not absolutely so, in the history of the society. A flower-pot, provisionally patented, was submitted for adjudication, having a narrow and shallow channel formed in the rim of the pot. The object of the channel was stated to prevent earwigs getting to the plants, but it was generally considered to be quite inadequate for the purpose. During very hot weather the channel of water would quickly dry up, necessitating constant refilling. The question of certifying varieties as suitable for market was raised, and led to a somewhat animated discussion. A motion was proposed and seconded that "no variety be awarded a first-class certificate or be commended as a market variety." It was contended that the rule regarding decorative sorts should also apply in this case, also that the fact of a plant being certificated as a market variety was rarely stated in the trade catalogues; consequently growers throughout the country were often misled in supposing such sorts to be those suitable for exhibition. An amendment was ultimately proposed and carried that "no certificate be granted to a variety for market purposes unless a plant of such variety be submitted to show its habit of growth and its free-flowering qualities." A resolution was moved altering the number of blooms to be submitted at future meetings to two, instead of three as formerly, but this was, however, lost. It was also decided not to meet on Mondays, November 28 and December 12, 1898, as previously notified in the horticultural press, as it was thought there would be quite sufficient meetings without these two. Each of the foregoing resolutions has to be confirmed by the general committee, who meet on Monday evening next.

A vote of thanks to Mr. Bevan for his conduct in the chair during the past season was unanimously carried.

**The weather in West Herts.**—A very warm week for the time of year, the temperature in shade rising on three consecutive days above 50°, and on one night never falling lower than 43°. At 2 feet deep the ground is at the present time 1° warmer, and at 1 foot deep 3° warmer than the December averages for these depths. Rain has already fallen this month to the depth of 2½ inches, which is nearly the average measurement for the whole of December, and greater than the rainfall of the two previous months taken together. The wind has been as a rule unusually

high, and during the night preceding the 11th the mean velocity for the hour ending 6 a.m. reached 20 miles—direction, W. During the past week the sun shone brightly for altogether about thirteen hours, which may be regarded as a good record for the middle of December.—E. M., *Berkhamsted*.

## NOTES OF THE WEEK.

**Nepenthes Amesiana.**—A splendid example of this is now in fine condition in the collection at Kew, where a well-grown plant is carrying some two dozen of the bold, bandsofely marked pitchers.

**Meconopsis nepalensis.**—The largest rosettes of this species are even now very attractive, as they nestle close to the surface of the soil. Where several large plants are in a group in the rock garden, the leaves with the recent rain lingering on them like drops of silver are very pretty.

**Pelargonium Duchess of Marlborough.**—This is a capital variety for winter flowering where such things can be grown with success, which, of course, is not in all localities. The blossoms are large and finely formed, white, with a suffusion of pink, which deepens towards the centre.

**Cyclamen persicum.**—A well-grown batch of the giganteum strain of Cyclamens may now be seen flowering in the greenhouse at Kew. The group is made up of much variety of colour, from the purest white to the richest crimson. The latter shade is singularly effective, and beside the lighter shades distinctly striking.

**Cissus discolor in bloom.**—Flowering examples of this well-known stove climber were among the exhibits of interest at the Drill Hall this week. The specimens came from the garden of Mr. W. C. Walker, Percy Lodge, Winchmore Hill. The blossoms are of a creamy yellow hue, and in this instance situated on the young shoots near the extremity.

**Tacca cristata.**—Quite recently at Kew we noted a plant of this curious species bearing about eight scapes and many of its curious flowers. It is doubtless a very interesting plant from a botanical point of view, and attractive also in bloom owing to the curiously formed flowers. These are of a reddish-purple hue, and with their appendages more curious than beautiful.

**Injury to fruit trees.**—Messrs. Saltmarsh, of Chelmsford, send us some specimens of the shoots of Apples, Plums, and Cherries which were injured by the great storm of June 24 last. The Pear trees are doing their best to get better, but in some cases the injury was so severe that it led to canker. If the trees had been struck with heavy shot they could hardly have been more injured.

**Rhododendron Queen Victoria.**—For winter-blooming this is a really beautiful kind, being charming in its colour and free and continuous in its flowering. It is also of a distinct apricot tone, and in this way somewhat exceptional, while the well-formed trusses are also compact and full. Like the white Princess Alexandra, it is a fairly good grower, and large bushes remain a long time in perfection.

**Codiaeum (Croton) Van Oosterzeel.**—A coloured plate of this plant was published in *l'Illustration Horticole* (Linden), vol. xxx., 1883. It is said to have been dedicated to M. Van Oosterzee, director of the zoological section at Batavia Botanic Garden. I suppose this is the same plant as the one referred to in *THE GARDEN* of December 11, page 467, but spelt C. Van (Ersted). Where does this spelling come from and which is the true one?—J. SALTER, *Neuilly-sur-Seine*.

**Escallonia montevidensis.**—This shrub generally flowers so late in the season that the large panicles of white flowers are partly destroyed by frost. The absence of frost, however, this autumn has been in favour of this plant, and flowering at a season when but few other shrubs are in bloom makes it doubly valuable. Like most other Escallonias, it thrives well in this moist, mild climate, and is easily propagated from half-ripened wood in sandy soil in a cold frame.—W. O., *Fota*.

**Azalea Deutsche Perle.**—As an early white variety this has for years been valued for forcing, and, seeing it is to be had in full bloom in Novem-

ber, it is extremely useful. For such very early forcing, however, the more established plants are best, particularly those that were gently forced a year ago, and were thus afforded an opportunity of making early growth. Some fine naturally grown bushes of this kind are now laden with the large snow-white blossoms, and with Chrysanthemums on the wane are most effective in the conservatory, where greenery largely prevails.

**Lælia anceps Amesiana.**—This is a lovely form of the dark section of this species, the sepals deep rose, shading to white at the base, the petals very broad and of fine substance, bright rose, heavily suffused with a darker shade at the apex. The front lobe of the lip is a rich velvety crimson, with a blotch of bright yellow across the base, the side lobes deep rose-purple, shading to yellow at the base, where it becomes thickly veined with bright brown-purple. It is a most distinct and desirable variety. A fine form was recently exhibited at the Drill Hall by Mr. F. W. Moore, Glasnevin Botanic Gardens.

**Begonia Winter Cheer.**—It is now quite easy to foresee that before many years are past our winter-flowering plants will be enriched by a group of Begonias almost equal to those of summer. Winter Cheer, which obtained the award of merit on Tuesday from the Royal Horticultural Society, is the result of crossing *B. socotrana* with a tuberous-rooted kind, the former being the seed parent. In the hybrid the pollen parent holds undoubted sway; indeed, apart from the fact of its flowering at this time of year, the new-comer has nothing in common with *B. socotrana*, but leans rather to the tall-growing, free-flowering tuberous Begonia of nearly two decades ago. The present winter-flowering kind is therefore not an ally of the tuberous Begonia of to-day, but has the taller and more branching character of the older kinds, yet considerably larger in its blossoms and more freely flowered.

**Carnation La Neige.**—One of the best winter-flowering Carnations is *La Neige*, a shapely, sweet-scented, pure white variety with a good constitution. Good plants of it raised from cuttings only last March are now flowering freely here in a cool conservatory. From these I have been cutting flowers for the past two months and there are as yet no signs of exhaustion. The flowers are hardly large enough to please those who want their Carnations as big as Malmaisons, but are about the size of an average border variety. The habit is excellent, as the plants branch freely without stopping, so there is no need for the very early striking which is necessary to produce flowers in early winter on many of the Tree Carnations. Plenty of grass is made and quite big cuttings strike very freely. This fine Carnation came to me with a first-class reputation from Mr. Crawford, late of Coddington Hall, and it has in every way sustained the good character it then received.—J. C. TALLACK.

**Sycamores injured.**—I notice in walking through a wood composed chiefly of Sycamores that the bark of nearly all has been ringed round, or almost round, to the width of about an inch. In the case of old trees these bare bands appear on the young branches, but in young trees of from 20 feet to 30 feet high the trunk itself is ringed round at intervals. As many as fifteen of these rings can be counted on one tree. I can think of nothing but squirrels which could reach so high. Can any of your correspondents tell me whether squirrels are known to be fond of the Sycamore bark, and whether this is likely to be their work? I can see no mark on any other kind of tree, and I should be sorry to destroy the squirrels unless quite sure of their guilt.—E. B. SWETENHAM.

**Grouping Chrysanthemums.**—At a local flower show the schedule says, "Group of Chrysanthemums, disbudded, to occupy 40 feet, arranged for effect in half-circle." What I desire to know is, what are the points that the judges give most credit for in awarding the prizes? Are the points (1) size of blooms, (2) new varieties,

or (3) the general effect of the group as to harmony of colours? Further, should the plants be so arranged that the whole group slants downward gradually from the back to the front of the half-circle (the back being against the wall of the room), or should they be arranged somewhat unevenly as to height? and further, should the blooms be close together, or so arranged as not to touch each other? My reason for asking is, my gardener arranged his rather close together and gradually sloping from back to front, the general effect being very good, but the first prize was awarded to a group more loosely arranged and in which the whole of the blooms were larger.—EXHIBITOR.

**White Jerusalem Artichokes diseased.**—In reply to Mr. Wythes, I may say I do not know which variety of the above it is I grow, but the stock was first purchased some years back under the name of New White. The majority of the tubers are more shapely than those of the old purple, but as among the round ones are found many elongated tubers on the same plant, I cannot consider that the shape is a correct indication as to the variety. Since penning my last note the disease has spread wholesale to the tubers, many of which have become absolutely rotten throughout and are simply masses of pulp. I enclose a few of the least affected tubers for your inspection, together with some pieces of stem and tuber-bearing thongs, which show the fungus plainly. In the portions of stem I have wrapped some large black nodules of the fungus itself in an advanced stage; these were found attached to the stems, both inside and outside, and you will be able by their aid to judge of the virulence of the attack. I have now lifted and stored all the seemingly sound tubers and hope to save the stock, in which case I shall plant on a different site next year. A fact perhaps stranger than that of the attack itself is that the old purple variety growing side by side with the white one is absolutely unaffected. As such a visitation of disease appears to be uncommon, it is to be hoped that no more will be seen of it, but I am doubtful if we shall be able to get rid of it at once, as thousands of spores must have ripened and been scattered about the ground.—J. C. TALLACK.

\*\* The Jerusalem Artichokes you sent are attacked, as far as I can judge from the present state of the fungus, by *Sclerotinia sclerotiorum*, which is one of the forms of the fungus known as *Peziza sclerotiorum*. The small black masses that you found are the sclerotia. These will hibernate, and in the spring will give rise to the *Peziza* form, which will produce spores which germinate and develop into long threads which permeate the tissues of the plants they attack, giving off a fluid that dissolves the cell walls of their host. It is said to be one of the worst enemies of cultivated plants. I should be very careful to remove every trace of the infested crop and burn it, and plant an entirely different crop next season on the ground, but I would not plant Potatoes there.—G. S. S.

## OBITUARY.

JAMES CASEY.

It is with sincere regret that we have to inform you of the sudden and unexpected death of Mr. James Casey, which occurred on the 8th inst., from the result of a chill contracted the previous week. The deceased, whose age was fifty-one, had been with us about thirty-four years, and latterly has represented us as a traveller in England, Scotland, and Ireland, where he was thoroughly well known and respected.

HUGH LOW & Co.

**Names of plants.**—*Spring Hill*.—1, yes; your Chrysanthemum is Viviani Morel from a terminal bud; 2, the Dendrobium often behaves as you say. This may be taken off and started on its own account.—T. S.—Box smashed to pieces. Please send fresh specimens.—N. Bond.—*Muhlenbeckia complexa*.—F. B.—*Eccremocarpus scaber*.

# THE GARDEN.

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[DECEMBER 25, 1897.

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## ORCHARD AND FRUIT GARDEN.

### FRUIT TREES FROM SEEDS.

SUGGESTIONS have been from time to time made in THE GARDEN as to the advisability of raising more fruit trees, especially stone fruits, from seed. This might certainly, and with advantage, be more practised in private gardens than it is, as the results obtained are often very good; there is always a chance of obtaining something which will add to the list of the very best fruits, and added to this is the advantage of having such trees on their own roots. Of course this would interfere but little, if at all, with the production of trees for commercial purposes by the usual methods of grafting and budding, as it is only by these means that we can perpetuate varieties of tried merit, and in the case of Apples and Pears the stocks now used, leave very little to be desired, but with such stone fruits as Apricots and Peaches, the results of budding on such stocks as are usually selected, and which are not even closely allied by Nature to the scions they carry, are far from satisfactory. The trouble given by sucker growths from these stocks is well known and not easily dealt with, for, do what one will, the huge bunches of Plum or other growths will persist in coming to the surface in an effort to establish a more direct communication between root and branch. More especially is this the case as the trees get older and less able to bear the diversion of sap thus occasioned. This suckering in the Mussel Plum makes it an ideal nurseryman's stock, as it can be raised in large quantities and quickly by suckers, which perpetuate the fault even more than seedlings of the same thing do. Many years ago, Knight in "The Horticultural Society's Transactions" pointed out the inadvisability of using this stock for the Moor Park Apricot, and advised instead the Apricot seedling stock. This advice is just as good to-day as it was when written, and might be extended to include all Apricots, for though

the one mentioned is more delicate and more given to branch-dying than most Apricots, the injurious effects of an unnatural stock are felt by them all. Speaking generally, it will hardly be denied that Apricot culture is not so satisfactory in this country at the present time as it once was, and though a change of our climate is generally blamed for this, it may well be that the use of bad, but easily raised stocks has had its share in bringing about the degeneration. As Peaches and Apricots come into bearing more quickly from the seed than do any other fruit trees, they are peculiarly suitable for trial on their own roots. I have raised and fruited Peaches in four years from the stone, and this without any special effort in the way of nursing them under glass. At the age mentioned the trees are still young enough to be used as stocks for others in the event of the fruits not proving worthy of cultivation, but my experience goes to prove that both seedling Peaches and Apricots which have been raised from good varieties are generally equal to the parent. I know at the present time where there is a wall some 50 yards in length covered entirely with seedling Apricots which are growing where they were sown; these are all really good varieties, and one amongst them bears the finest Apricots I have seen anywhere in the district. Some few years ago two of these trees fell, as Apricots will, into bad health, and had they been worked trees there would have been nothing for it but to root them out. Instead of this they were cut down almost to the ground, since which they have again filled their allotted space, and appear to be as healthy and vigorous as ever. A similar case which occurred here this year was that of a home-raised Peach tree seven years old. An accident last winter deprived this tree of its entire head and 3 feet of stem, but a new head was formed from a single bud. The newly-formed stem measures already 3 inches in circumference at the base, and the whole growth shows that the Peach tree on its own roots is vigorous and well suited for stocks even if it fails as a good

fruiting variety. The one in question is a seedling from the old Raymakers, and is a worthy descendant of that fine late variety, being a healthy grower, free bearing, fruit of good size and quality, highly coloured, and, although later than any other variety grown here on outside walls, it is juicy and never woolly.

It has been suggested that in raising these stone fruits the plants should be raised and grown for the first year under glass. With this I do not agree, as the seeds germinate better when sown at the foot of outside walls and kept uniformly damp; and as there will be a percentage of weakly growers in every batch raised under any conditions, it is well to find these out and get rid of them at once instead of nursing such weaklings through their early stages, only to find out their delicate nature after a year of such nursing. I have always found that the majority of such seedlings became sufficiently ripened to withstand any wintry weather in their first year, and it is a tolerably well recognised fact that most plants hardly enough to resist an ordinary winter at any time are hardiest when young. It has been stated that where Peach trees are grown on their own roots, or where they have been used as stocks, they are very subject to the "yellows," but this has not been my experience, and well-grown trees are very seldom troubled with that complaint in this country.

Seedling Apples and Pears are slower in fruiting and much less certain as to quality than are the fruits I have already mentioned; still, there are but very few private gardens where room could not be found for raising a few, and the young trees make good stocks for others if they do not themselves prove worthy of perpetuation. Nurserymen who want to clear their stock quickly cannot afford to enter into this work, but that fact should not deter those who have the opportunity from trying to make the world the richer for their labours in this way. Mediocrity among fruits is plentiful enough, but there is still plenty of room for more sterling varieties. J. C. TALLACK.

## ORANGES FOR CHRISTMAS.

For the past few weeks the neighbourhood of the Floral Hall, Covent Garden, has been beset with the traffickers in the yellow fruit to an unprecedented degree. Time was when Pudding Lane held the monopoly of the market in the luscious imports from Spain and Portugal, and the merchants whose warehouses lie thickly scattered about the Monument, encroaching even upon the foundation land arches of London Bridge, still exercise a commanding influence upon the trade; but with the expansion of the Duke of Bedford's accommodation the opportunities have been afforded for developing sales by auction in the west central district also.

From these centres London is supplied with "green," as distinguished from "dry," fruit, and many provincial cities also draw upon the vast supplies which are unladen in the Thames. But, in addition, there are steamers plying from Valencia direct to Bristol, Hull, Liverpool, and Manchester, via the Ship Canal. And so many have been the cargoes received, that when the time comes to complete the December returns it will, it is expected, be found that 1897 has been a "record" year in the Orange trade. An enormous quantity of this fruit had, up to the end of November, been imported, the total, reckoned in bushels, for the eleven months approaching very closely seven millions, of the value of nearly £1,800,000. Taking corresponding periods of the past three years, our Orange bill for 1897 exceeds by the round sum of £325,000 the amount paid last year, and is, roughly, £150,000 above what we disbursed for Oranges in 1895. The supply of Lemons also has very largely increased.

Of the lasting popularity of the Orange there can be no manner of doubt. It is one of those fruits which we cannot very well produce ourselves, though in the last century it was commonly grown in conservatories, and as long since as 400 years ago the Carews of Beddington, in Surrey, cultivated Orange trees in their garden, sheltering them in the winter, and there they remained until destroyed by the great frost of 1739-40. It is on record that the first Oranges brought to this country came from Spain as early as the year 1290. They were called the Poma d'Orange, and were of the bitter, or what dealers call the sour variety, such as are to-day used for medicinal preparations, the expression of essential oils and almost exclusively for the making of marmalade. To-day we are by no means dependent on Spain, though in sweet Oranges Valencia and Denias still lead the way. Denias especially have been very popular with buyers, who are well aware that their rich golden colour appeals to a large public. The quality, too, has been remarkably good, whereas some of the Valencias, though expected to improve in later shipments, were rather below the average, but, nevertheless, arrived in good condition. Both Denia and Valencia Oranges are packed in cases containing from 200 to 1000, and it is a point of some interest that a section of the wholesale trade is entering into a new departure by the supply of unbroken packages of picked fruit to the public direct, thus saving the intermediary profit of the retailer. This new business has originated at Covent Garden. The dealers are not doing more, however, in breaking through old-fashioned trade customs than what the large suburban stores and grocers, who buy in Pudding Lane at public auction, have done for some time. These tradesmen place the middle-class public on an equality with the working class, who are supplied by costermongers regularly frequenting the Monument sale room, bidding at first hand for the lots they fancy.

Some kinds of Oranges rarely find their way to the street barrows, which, in the nineteenth century, have replaced the Orange hawkers of Nell Gwynne's day. Jaffas are sweet, but their colour is paler than that of the Spanish fruit, which by some people is regarded as a disadvantage. They are not so pale, however, as the well-grown, very sweet Teneriffe Orange, which may be seen in shops, and they are not, perhaps, quite so handsome as the curious Californian Navel

Orange, not yet in great quantity. The shapely Jaffas, however, are in considerable demand, and in certain circles they displace the Valencias, Denias, and Mureias. They are in cases holding from eighty to 160, slightly larger than the Canary Islands packages. What is known as the Seville Orange is a bitter one. It has been cultivated without intermission in abundant groves around the city, which gave to it its name when the Moorish conquerors first planted the Orange tree in Andalusia. "Sours" also come to us from Malaga and from Palermo. Mandarin Oranges, in boxes of twenty-five, fifty, or seventy-two, from Valencia, are especially in favour at this season, and the masses appear to be very partial to the luscious pulp. Moreover, not much time is lost in peeling a Mandarin Orange, as the rind readily separates from the flesh.

The money which is being paid for the extra supplies of Oranges and Lemons probably would, in a more favourable season, have been spent in Apples. So far as this year has gone, this country has given for imported Apples about a quarter of a million less than it did twelve months ago, though the total does not compare unfavourably with that of 1895. The loss is chiefly borne by America, Canada and Nova Scotia. From them we have the extremely popular Newtown Pippins, which, in their first qualities, make better prices than the Nova Scotian Ribstons and the ruddy-checked King Pippins. Then we have the Blenheim Orange, the Baldwin, Northern Spy, and Ben Davis, with other varieties, but the first three named are the favourites. France and Holland contribute a small Apple supply. Trade is brisker, prices are advancing, and the market is looking much brighter. It is too early to talk about Tasmania, but California is an important source. The late large consignments of Pears—shipped upon improved methods—are bound to have some influence on the French packers. Pears are still in the shops, but they are not a Christmas fruit. It is otherwise with Grapes. They can always be had. We spend about half a million annually in foreign Grapes, and they are cheaper every year. At all events, the quantities increase in a greater ratio than the price. Grapes are not a thing we leave entirely to the foreigner, for the home and Scotch growers do well with the best hot-house kinds, and Guernsey, too, sends us Hamburgs, Muscats, Gros Colman, and Alicante in neat little handled baskets holding from 5 lb. to 8 lb. The white Grape so popular with the costermongers is the Almeria, which is despatched in neat 65 lb. barrels from Spain, but the cheapest Grape of all just now is the Belgian.

Bananas belong to those fruits originally introduced as luxuries, which have become almost necessities. They are being sent from the Canaries green, and they ripen here, the colouring making a difference in value of from 2s. to 4s. per bunch. Salesmen judge them by the number of rings—seven to ten to a bunch—which, in corkscrew fashion, wind round the stem, carrying from fifty to 120 fruits. Pine-apples are arriving from St. Michael's, in the Azores, five to eleven in a case, with the green tops carefully preserved, for they enhance the value. A considerable export in these takes place to the Continent. Unless Teneriffe egg or apple-shaped Tomatoes be classed as a fruit, the Christmas list is exhausted, though, of course, under the category of seasonable dessert are grouped Dates and all sorts of Nuts, the best Chestnuts coming from Italy, closely approached, however, by the Spanish, the cheapest being the French. France is sending kiln-dried Walnuts from Bordeaux, and Walnut kernels; Italy and Spain supply small Nuts and Peanuts; and when Cocoa-nuts reach us from the British West Indies they are to be reckoned by hundreds of thousands.—*Daily Telegraph*.

**Pear Passe Crassane.**—This is a peculiar variety, and though a few growers get fruits with first-rate quality a great many fail. Doubtless where this variety succeeds it is one of the finest late Pears known. I have seen splendid fruit in a

cool house, but with me, even on a south-west wall, it does not make a good growth. I have seen younger trees doing well. These were double worked, and treated thus it is more reliable. The fruits are medium-sized, green, covered with russet, flesh melting. The best fruits I ever saw of this variety were from old trees planted on a low west wall, the stems being drawn into a cool house. Passe Crassane is worth growing for supplies early in the year where a warm corner can be given the trees, or, what is better, a glass case.—S. H.

**Apple Mannington Pearmain.**—This is one of the best dessert Apples we have if quality is considered, and it generally does well in most soils. It is not large, and is in season from Christmas to February. The fruits are medium sized, conical, and of a greenish yellow colour, skin streaked with russet. It may be kept well into March if gathered late and given a cool store. It makes a good bush or pyramid on the Paradise stock, but the latest fruits are obtained from the standards. The fruit at the late season noted is really excellent from the trees grown on the natural stock. At the great Apple Congress it held its own, no less than forty dishes being staged in 1883. I have since that date grown it as a cordon, but it is not so prolific. I prefer it as advised above.—G. W.

**Apple Court Pendu Plat.**—This is a valuable winter Apple, and one that should find favour for its late keeping, as it comes in when Cox's Orange is past. This variety is easily recognised by its flat appearance, open eye, greenish russet skin streaked with red on the sunny side, and its firm, sweet flesh. The trees fruit regularly if not too hard pruned. It does well in pyramid or bush form, and I have seen excellent crops on standard trees in the southern parts of the country. This variety often escapes late spring frosts, as it is one of the latest of all to flower, and thus a crop is more regularly ensured. Few varieties equal this for late supplies, as it may be had good in the spring, but it must be left as long as possible to prevent shrivelling. I have had good fruits in May, but its season is from February to April.—G. W.

**Pear President Barabe.**—That a distinctly new Pear should at once gain an award of merit and the first prize in the Veitch competition for flavour, and so late in the year as December 14, is indeed a matter for satisfaction. This is, I believe, the first novelty in both Apples and Pears the flavour competitions have brought forth. It is some reward, and it is hoped more novelties may presently crop up. A Pear that is so good in the middle of December, and would be, doubtless, in ordinary seasons good into January, is a valuable acquisition, especially that when put into competition for flavour with Winter Nelis and Glou Morceau it should have taken first place. We are now fast getting through with Pears of any merit. Josephine de Malines was poor in quality, though pleasant in flesh. Winter Nelis was at the recent meeting richly flavoured. Glou Morceau was melting and delicious, yet not, in the judges' estimation, giving the high flavour of President Barabe or Winter Nelis.—A. D.

**A new white Grape.**—I am perfectly content to leave to the judgment of Grape growers of a few years hence the question as to whether the members of the Royal Horticultural Society fruit committee who voted an award of merit to the Marchioness of Downshire Grape were wise in their decision. When it is remembered that so many Grapes getting similar awards have during the past twenty years or so been put into commerce, and white Grapes especially, not one of which can now be classed as other than very second-rate, is it not fair to ask for greater caution in the matter henceforth when any variety of doubtful quality is presented to the committee as new? It does not seem too much to ask that any new Grape should first pass the ordeal of a trial at Chiswick ere it is put into commerce. The raiser would not suffer by waiting another year or

two, but would rather gain were any seedling variety to come out of such a trial well. An award of merit to a Grape enhances its pecuniary value immensely, but does not in the least enhance its fruiting value, and the result is that purchasers are in the end, as they have so often been over certificated Grapes in the past, greatly disappointed.—A. D.

**The Veitch prizes for flavour.**—It is evident that something is wanting in the arrangements which govern these competitions, for their practical value up to this time, especially among Apples, has been very little. We want no further proof as to what are the best two or three varieties, and the constant recurrence of these prizewinners keeps the others from attaining their true place in any prospective tabulated list. I have suggested before that a maximum number of times any variety should be placed first should be fixed, and as each variety attained this maximum it should be debarred from future competition and placed on the list in its proper order. This method would greatly enhance the value of the tabulated report suggested by "A. D.," only, to further the scheme, I would suggest the removal of the clause that now prevents any one grower from winning more than once with the same variety, for the reason that one or two growers might possess a first-rate new variety which has not been widely distributed, and which under existing conditions could not possibly take its proper place in the list. Such restrictions are right enough in showing under ordinary conditions, but in these competitions the one object should be to get at the best fruits wherever and by whomsoever grown. I do not agree with "A. D.'s" suggestion that any variety winning two years in succession should be withdrawn; it would be much better to fix a number of times each should win, for under "A. D.'s" conditions an Apple with a very short season would be placed on an equality with others which are available for use over a long season, and which should be of greater value accordingly.—J. C. TALLACK.

#### THE CHERRY UNDER GLASS.

CHERRIES are not grown nearly so frequently under glass as they might be, especially in gardens where there is a large demand for fruit in variety for the dessert. This is a pity, because there is no difficulty in their culture, neither do they require a great deal of heat. They are not only less difficult to grow, but they require much less warmth than many other subjects that find a home in our hothouses. A Cherry house is a most useful addition to the glass-houses in any garden, and as these can now be constructed at such a cheap rate, it is a wonder that they are not more often met with. Indoors the fruits are secure from insects and birds—their natural enemies—and when fully ripe the fruit will, under good management, keep in excellent condition for some time. In some places Cherries are forced so that ripe fruit may be had in April and May. To do this, two or three compartments or houses must be set apart for them, that is, if a regular succession is required. The first house would then have to be started about the middle of November, the second in January, and the third allowed to come on naturally in the month of March, merely excluding frost should such a necessity arise. If not required so early in the season, two houses would suffice, starting the one in January and allowing the other to come on in a natural manner, as before stated. In some cases the fruits are not required until the usual time for them to ripen outdoors, and in this case one house would be sufficient, and it should be of considerable size if there is a large demand for Cherries. The trees in all three instances may be planted out, but for early forcing they are undoubtedly best grown in pots or tubs. They are then portable

and can be turned outdoors during the summer months to perfect growth and to plump up their buds, also to undergo the necessary period of rest. When grown in pots or tubs and liberally treated, the trees are available for forcing for a good many years. When they begin to exhibit signs of exhaustion, it is an easy matter to prepare for such a contingency by potting up a fresh lot of trees to take their places.

Trees of suitable size can be purchased at a cheap rate at any of the nurseries where fruit-tree growing is made a speciality. After these have had one or two seasons in which to become established, they are then ready for forcing. Until required for forcing they may stand outdoors altogether, only the precaution should be taken to either plunge the pots during the winter or otherwise pack some non-conducting material round and over the tops of the pots. This not only protects the pots from injury, but it prevents the balls of soil from becoming frozen into a solid mass. As early in the autumn as possible is the best time for potting, and if required merely to form a reserve, two-year-old trees will suffice. Trees four and five years old should be purchased ready established in pots to make a start with, as, no matter how well the lifting and potting may be done, it would be folly to attempt to force recently potted trees. They must at the least have one season in which to get re-established after lifting, and those who are thinking of building a house for Cherries should bear this in mind and make preparations accordingly. For planting out, cordons budded or grafted on the Mahaleb stock are the best. These may be single, double or treble-stemmed, just as may be preferred, and if the house is a lean-to or a span, plant them at the front and train them up under the roof. In the case of a lean-to, a three-quarter or a hip-roofed span, the back walls may also be utilised for growing cordons against. In the meantime, or until the trees grow up and cover the roof trellis, the body of the house may be filled with pot trees, thus making the utmost use of space which would otherwise be wasted. A great number of cordon trees could be accommodated in a house from 30 feet to 40 feet long, and a selection of varieties can be made so that it would contain early, midseason and late varieties if only one house is to be devoted to their culture. If three houses are set apart for Cherries, the earliest varieties should be planted in the first, the midseason in the second, and the latest in the third or last house. Regarding

#### COMPOST

for Cherries, this must not be too rich, otherwise the trees will make gross growth, which necessitates a great deal of stopping and hard pruning, with resultant gumming. The selection of compost will depend a great deal upon circumstances, as in some localities the soil is eminently suited to the growth of the Cherry, and in others it is the reverse. A sandy rather than a heavy loam is best suited to its requirements; therefore loams inclining to be heavy should be made porous by the addition of lime rubble broken small, and very light sandy loams should be corrected by adding sufficient dry pounded marl or clay to make them of the right consistency. To loam which is naturally poor, add bone-meal and half-inch bones, half a hundredweight of each to each ton of soil. For pot trees place a handful or so of half-inch bones over the crocks instead of mixing them with the soil. Avoid farmyard manure, as it only promotes rank growth, which brings gumming in its train, and if manure is required at all, use bones in the forms previously men-

tioned. Pay the same amount of attention when constructing the borders as for Peaches and Vines if the subsoil is clayey and damp. If the subsoil consists of gravel or sand, the laying of a concrete floor would of course be unnecessary, but under any other conditions it is far the wisest course to concrete, and avoid future trouble. Good drainage must also be provided, and the border itself must be made firm by treading and beating the materials as the work of construction goes on. Planting is best deferred, whenever possible, until the soil in the borders has had time to settle down, and even then an allowance for shrinkage should be made by not planting the trees too deeply. For pot or tub culture make the soil as firm as possible by ramming it with a blunt-ended potting stick. Borders need not be constructed of the full width at the outset, but may be made from 3 feet to 4 feet in width, and added to each or every other year as may be deemed necessary, or according to the rate of progress made by the trees.

#### VARIETIES.

The following are the names of twenty varieties of Cherries suitable for growing under glass: Early Rivers, Early Red Bigarreau, Bigarreau de Schreken, Belle d'Orleans, Empress Eugénie, Knight's Black, Black Tartarian, Black Eagle, Elton, Governor Wood, May Duke, Royal Duke, Reine Hortense, Nouvelle Royale, Emperor Francis, Archduke, Bigarreau Napoleon, St. Margaret's, Bigarreau de Hedelfingen, and Late Duke. A. W.

**Apple Cox's Orange Pippin.**—I have tried this in all sorts of ways, and in no way is it so satisfactory as in that of a dwarf bush or naturally grown spreading tree. If I were starting a new fruit garden I should have a large proportion of the bush trees of this kind, for it very rarely fails to crop and the fruit always commands a good price. The great thing is to give it good liberal culture and thin the fruit rather severely. I have formed good-sized trees by re-grafting strong growing kinds with a large number of grafts, and then letting them grow with very little pruning. When once the trees commence to fruit, they will make but little wood growth afterwards.—J. G., Gosport.

**Plum Coe's Golden Drop.**—In many parts of the country this Plum gives a good return when others fail. This should be borne in mind by intending planters. I do not say it is one of our heaviest croppers, but it bears a fair crop in most years, and this in connection with its quality, size, and appearance should make it a favourite. I noticed good crops of this variety in the north on walls, and in the far north it well repays for a south-west wall. Few varieties do better in a case or cool house than this, and for pots it is excellent, as it makes a compact, fruitful growth and bears splendid fruits. The fruits keep weeks after being gathered, and if left hanging on the trees in a cool house are like a sweetmeat.—G. W. S.

**Pear Zephirin Greigoire.**—This is a small fruit, and doubtless will not find favour with many on that account. This year my fruits are larger than usual and of excellent quality. It is worth a place where high quality is studied, as the fruits are delicious and not unlike a Passe Colmar in appearance. The flesh is very juicy, rich, and free of grittiness. My best fruits are produced on bush and pyramid trees. It forms a natural pyramid with little pruning and bears freely. I find it does best on the Pear stock, though this does not apply in all soils, as in the south I have noticed excellent results on the Quince. Being a compact grower it does not run to wood on the natural stock, like some varieties. Its season is Christmas, a period we have none too many good Pears.—S. H.

## CHRYSANTHEMUMS.

## DECORATIVE CHRYSANTHEMUMS.

In the production of large exhibition blooms the equally useful and certainly indispensable decorative section seems somewhat neglected. It is the early and late varieties in this section that meet with the largest consideration. Those sorts that might be termed midseason invoke no enthusiasm when associated with the giant flowers. This, however, is not altogether as it would be, but it is true in many cases.

The value of the early Chrysanthemums this year was greatly lessened by the mildness of the autumn, keeping up such a wealth of outdoor flowers and this continued all too late for the welfare of a great many growers. The same conditions have told unfavourably on the late section, especially those intended for Christmas and the early months of the new year. Niveum, one of the most popular late kinds, in many cases is over some time before that date, and the same might be said of Lady Lawrence and Golden Gem, other favourites for the same period. I know of nothing more useful than a good batch of well-bloomed plants of Niveum at Christmas, and it is undoubtedly a variety that has come to stay. Mrs. H. Weeks is another beautiful white kind well adapted for growing in bush form, though its habit is somewhat tall. This would vary no doubt in some seasons and under different treatment. Grown under the adverse conditions common to private gardens, a great contrast is observable in the plants compared to those flowered in the light and airy structures of the market men. L. Canning, once so highly valued for late cutting and furnishing, has lost favour from its indifferent growth and consequent poor flowering characters. I have overcome these objections by retaining the plants and growing them a second year instead of striking so many cuttings and throwing the year-old plants away. Under this treatment I have a good batch of well-flowered, healthy plants that will give plenty of material for the house at Christmas and during January. A portion of the stock must needs be raised from cuttings, so as to have these older stools for potting on, and for convenience the young plants are grown in 8-inch pots, which allow of their being reduced after flowering, placed in 6-inch, and finally transferred into 10-inch pots to flower again. This last size is large enough for L. Canning under any conditions, and the treatment to which the plants are subjected answers my purpose. Those of your readers who have failed with it as yearling plants may do well to give this plan a trial, if only in a small way. The red sport just announced will be an acquisition if it retains the same characters as its parent, and the colour is a decided one; but is not a rather unusual break from a white flower even in Chrysanthemums? This is the first sport I have heard of from L. Canning, and its counterpart in a good yellow shade would be invaluable. Golden Gate is a fine decorative sort, though, like others in the late section, this has come early this year. This is no doubt attributable to the mildness of the autumn and the many warm, sunny days of November. E. G. Hill, too, usually a January sort, is in full flower almost a month too soon, which is also true of Leon Frache, Boule d'Or, Mme. Felix Perrin, Boule de Neige, and New Year's Gift, the last a very nice white, having stiff stalks that carry the flowers erect. Mme. Felix Perrin is a very pretty pink variety, recommended as a superior rival to Leon Frache, and so it has proved, though the latter has cer-

tainly been a victim to the mildness of the autumn and is not so deep in colour as in former years. Phœbus has been very nice, and Cecil Wray bloomed most abundantly, but will be discarded because of the failure to carry its flowers erect. Drooping blossoms convey the impression that they are stale when this is far from being the case. W. H. Lincoln still claims a good position, and Golden Star, a bright yellow single, is very pretty and a good keeper. Amos Perry, E. Dobree, and M. C. Molin have not proved so useful as in the past and will be discarded.

In the early section Lady Selborne still maintains its high position, but the yellow form has certainly lost favour on account of its weak constitution. The Desgrange sports, too, have some dangerously close rivals, yet it will be a long time before they will be generally discarded. Lady Fitzwygram, unless disbudded freely, is very poor, and the same may be said of Queen of the Earlies. With me the former did much better planted outdoors, and I have decided to discontinue pot culture. Rycroft Glory is a gem for pots or as a cut flower, so bright, free, and dwarf. Source d'Or and its yellow form are without rivals in their respective colours, but Wm. Holmes I do not care for, its colour compared with that of Source d'Or, and which flowers at about the same time, being very dull. Among incurved varieties Globe d'Or is very effective, and I have also seen Major Bonaffon producing very fine sprays of golden flowers. Mlle. Marechaux is a good late white, though not often seen, and to see this at its best it should be treated the same as advised for L. Canning. There are many others of the Japanese section suitable for growing in bush form, and no doubt among the newer ones distributed so freely every season others will be found to supersede many that are popular at the present time. White, yellow, and red varieties seem to be the favourites, though other shades find favour to some extent, not so much perhaps for market as for private demands. Possibly other correspondents may be able to name some of the newer kinds that are well adapted to bush treatment, producing freely flowers of a popular shade of colour, and at the same time carrying the blooms on stiff though not necessarily stout footstalks. W. S.

Wills.

**Chrysanthemum Mme. Rozain.**—The flowers of this sort incurve, the florets being very thick and lasting. As a late-flowering variety it is about the best of its colour, a nice shade of pink. Curiously in one place it is met with growing as freely as any kind, and another cultivator may find some difficulty with it. Probably over-feeding has much to do with failures. The variety forms a capital bush plant and has fine foliage.—H.

**Chrysanthemum Tuxedo.**—This variety has been cultivated a considerable number of years, yet it is not at all common. As a late-flowering bronze kind it is of exceptional merit. The habit is somewhat tall, but the plant may be headed back freely in the early part of the season. Its blooms are produced on long footstalks, and they last of good colour right through the dull portion of winter. Few varieties equal it in this respect, and it is a sort that should find general favour.—H. S.

**Chrysanthemum Niveum.**—This pure white variety is excellent for conservatory decoration when in the condition lately noted at Bramley Park, Guildford. One stout stick is placed in each pot, and the main stems are looped loosely to it. The plants having been topped when young have several branches, and these are allowed to produce flowers without any further disbudding. The result is a wealth of blooms in

varying sizes borne on the side shoots as well as the points of the stouter stems. The specimens in question being of large size, a particularly fine effect is obtained. Niveum being an exceptionally good late kind, the flowers will last fresh up to Christmas.—H. S.

**Chrysanthemum Mme. Edmond Roger.**—A few years ago Florenee Davis attracted a good deal of attention owing to the peculiar sea-green tint that suffused the otherwise white blossom. Owing to differences in cultivation, some flowers had this distinct shade much more pronounced than others, but when at its best this variety was—at least, in the opinion of some—regarded as one of the most desirable of Chrysanthemums. After that there was a good deal of fuss concerning a green Chrysanthemum, which proved, however, to be but a poor thing. In the variety Mme. Edmond Roger we have what promises to be a very beautiful kind, whose peculiar greenish tint eclipses even that of Florence Davis. It is at present not much grown, but another season it should be far more plentiful. The raising of new Chrysanthemums is, however, so much over-done that they cannot all be fairly tested, and many are doubtless passed over that would on further acquaintance become very popular.—T.

**Single Chrysanthemums at the Aquarium.**—In your report of the recent Chrysanthemum show at this place some fine singles are mentioned as being too formally set up. That was my own opinion, for the flowers were as flatly and unevenly shown as could be. Seeing that these singles are so appreciated for their lightness, grace, and elegance, it may be worth while suggesting that judges be empowered to base awards in the single classes partly on style of setting up. If still shown in tubes in threes, the flowers should be more elevated, and the back bloom in each bunch be placed rather above the other two. Some day, perhaps, we may see a class for six blooms of a variety shown in vases. The more such informally arranged classes are introduced into shows the better are they liked by visitors, many of whom are less attracted by the huge blooms on the show-boards, and are far more entranced with any decorative effects in which the Chrysanthemum plays the major part. These bunch classes, however, are very charming, and it is a pity they are not more seen at smaller shows. Too much space is still devoted to the Chrysanthemum as a purely show flower, and much too little to its beauty for decoration.—A. D.

## SHORT NOTES.—CHRYSANTHEMUMS.

**Chrysanthemum Mrs. James Carter,** sometimes called Thistle, is a pretty variety when seen as a huge bush plant. The colour is very light yellow. It has small individual blooms, these being composed of light hair-like florets. In a mass they are striking, and the sprays are most delicate in a cut state.—S.

**Chrysanthemum Major Bonaffon.**—This is a first-rate late sort, the colour a soft, bright shade of yellow. The florets, which are of good substance, incurve with just enough regularity to be informal and light. The growth of the plant is sturdy. In America it is highly esteemed as a market variety, and were its qualities better known it would be equally valued in this country.—S.

**Chrysanthemum King of the Plumes.**—This variety deserves extended culture. As its name implies, it bears flowers of a light feathery character. These are rich yellow. The growth is free and naturally branching. It should not be disbudded, then each branch sends up a quantity of medium-sized blossoms that last well into the winter. In fact, it is regarded as a late-flowering kind and one valuable for cutting.—H.

**Chrysanthemum W. H. Lincoln.**—For a late supply of yellow blooms I doubt if there is any sort to equal this old one. Mr. Paddon, the gardener at Bramley Park, grows it splendidly. About two dozen specimens, each from 2 feet to 3 feet through, form a fine mass of colour. The stems of this kind are so stiff that little training is needed, and the flower-stems are equally firm, holding the blooms well up from the foliage.—H.

## FLOWER GARDEN.

## THE HARDY SPECIES OF CLEMATIS.

When Bentham and Hooker published the first volume of the "Genera Plantarum," in 1862, they estimated the number of species of Clematis at 100. Since that time the genus has been added to by discoveries of new species in several parts of the world, and there are now probably about 150 species known. Of these,

garden value it is the hardy species almost exclusively that possess any importance; there is, in fact, only one greenhouse Clematis—the New Zealand *C. indivisa*—that is held in any great esteem by gardeners. But among hardy climbers there is no group of plants that equals the Clematises in variety and number, or even in beauty if we exclude the climbing Roses. Such popularity as the genus now enjoys may be said to date from the introduction of *C. lanuginosa* from China by Robert Fortune in

observations that have recently been made in these columns respecting the wild Roses (THE GARDEN, November 13, 1897, p. 384) apply with equal force to this genus. Whilst none of the species of Clematis can vie with the best varieties of the garden race in mere showiness, they possess a charm and sweetness of their own as well as an exceptional interest to all lovers of hardy plants. There is, happily, in these days a reviving interest in the original types of garden races of plants which in the striving after size and showiness of flower were in danger of being forgotten.

The species of Clematis vary in habit from herbaceous plants little more than 1 foot high to woody climbers with stems 50 feet or more in length. The leaves are always in pairs at each joint, and although occasionally simple, are more frequently compound, consisting of three, five, seven, nine or more leaflets. Most of the climbing species support themselves by means of the leaf-stalks, which curl round twigs or other slender objects near. The leading features of the Clematis flower are too well known for it to be necessary to dwell upon them long. It possesses no true petals, but in their place a coloured calyx consisting of usually four, but sometimes as many as eight sepals. The species belonging to the *Atragene* section (once kept generically distinct) differ from the true Clematis in having between the sepals and the central tuft of stamens one or more rows of petal-like organs which may either be considered petals or abortive stamens. In the more showy species the flower is flat or nearly so and the sepals spreading, but in numerous species it is bell-shaped or pitcher-like, the sepals contracting towards the top into a neck, but with the points spreading and more or less recurved. The seed-vessels, which are numerous and one-seeded, are each terminated by a long and often feathery tail, which gives to the heads of fruit that characteristic appearance of which so familiar an example is furnished by our British *C. Vitalba* in autumn.

The Clematises like an open loamy soil, which should always be fairly rich, and in the case of the largest-flowered kinds even very rich in vegetable humus and fertilising material. All of them appear to succeed best in a chalky soil, and in gardens naturally devoid of chalk or lime it is advisable to supply it. A thorough annual mulching with rotted manure given about November is of great benefit, especially where the soil does not naturally retain its fertility long. Such pruning as may be necessary for these wild types (and it is chiefly a question of the space to be covered) should be done in February. The stronger growers stand pruning well, and if they grow up their supports too high and form a thick heavy tangle at the top, they may safely be cut hard back. The weaker ones rarely need pruning at all. The Clematises may be used to cover walls, rootwork, mounds, arbours, pergolas, &c., and in the open, where no other support is available, rough Oak branches may be used for them, either singly or several set together to form a pyramid.

The following is a list of the species and more noteworthy hybrids dealt with in the present paper. I have roughly classified them, but the grouping must not be taken as necessarily indicating a natural relationship between the species brought together. Such often does exist, but I have arranged them more with a view to the characters obvious to the cultivator than to those upon which the scientific classification of the genus is founded. The nomenclature followed is that of the Kew "Hand-list of Hardy Trees and Shrubs," and for the complete synonymy that work should be consulted.



The sweet-scented Virgin's Bower (*C. Flammula*). From a photograph by Miss Willmott. (See p. 500.)

by far the larger number come from the cool and warm temperate regions, a few only being found in the torrid zone. Not many genera of plants are more widely spread over the globe; Northern Asia possesses the largest number of species, and following that region in importance comes North America, but the Clematises are also plentifully represented in South America, Europe, and the Australasian region. Less numerous they occur in North and South Africa, Java, &c. From the standpoint of

1851, and the intercrossing of it a few years later with other species, which resulted in the advent of *C. Jackmani* and the numerous progeny it represents. Among the hybridisers and cultivators of Clematises, the names of Jackman, Cripps, Noble, Anderson-Henry, Simon-Louis, and, latterly, Smith, of Worcester, hold the foremost places. In the present paper, however, I propose to deal more especially with the original wild types of Clematis, which have in late years been somewhat neglected. The

## HERBACEOUS.

Douglasi.	Fremonti.
Heracleafolia (tubu- losa).	Integrifolia.
„ var. Davidiana.	Ochroleuca.
Recta (erecta).	Stans.

## WOODY DECIDUOUS CLIMBERS.

(I.—With panicles of numerous white or yellowish flowers.)

Apiifolia.	Brevicaudata.
Connata.	Flammula.
Ligusticifolia.	Paniculata.
Virginiana.	Vitalba.

(II.—With solitary, closed or pitcher-shaped flowers.)

Ethusifolia.	Campaniflora.
Coccinea.	Crispa.
Fusca.	Piteheri.
Viorna.	„ var. lasiostylis.

(III.—With large and, except in montana, solitary flowers, the sepals fully or partially expanded.)

Alpina.	Aromatica.
Florida.	Hendersoni.
Jackmani.	Languinosa.
Montana.	Orientalis.
Patens.	Robertsiana.
Verticillaris.	Viticella.

## EVERGREEN CLIMBERS.

Calycina.	Cirrhosa.
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**C. ETHUSIFOLIA.**—This is a Chinese species, and has been found by several collectors in the neighbourhood of Pekin; from there, however, it extends eastwards to the Amur River, in Manchuria. It is a graceful climber, with slender grooved stems and branches. The leaves are bi- or tri-pinnately divided, the ultimate segments (in the type) being very narrow and irregularly toothed. The flowers have no bright colour to recommend them, but they are abundantly produced and extremely graceful. They are borne singly on stiff, erect peduncles, but are themselves pendulous. Each one is from half an inch to three-quarters of an inch long, somewhat bell-shaped or even tubular, the sepals being yellowish white, and having their tips recurved shortly. Like most of the Clematides, this species varies a good deal in shape of leaf, and one form has been considered distinct enough to receive the varietal name of *latisetata* (*Botanical Magazine*, t. 6542). In this variety (which was found by Dr. Bushell near Pekin, and by other collectors near the Amur and Ussuri Rivers) the ultimate divisions of the leaf, instead of being narrow and linear, are as broad as they are long, about 1 inch in length, and unevenly toothed and lobed.

**C. ALPINA.**—A very pretty species belonging to the *Atragene* section, and flowering in spring. It extends over a wide area, reaching from the mountains of Central and Southern Europe to Siberia, and eastwards as far as North China. The stems are very slender, with prominent joints, which become more and more swollen with age, whence are produced both flowers and leaves from the same bud. The flowers are nodding, the four large sepals being blue with a whitish margin, or sometimes almost entirely white (var. *alba*). The *Atragene* section differs from the ordinary Clematis in the flowers having petal-like organs. In this species they number about a dozen and are small and dull white. The flower is 2 inches to 2½ inches across. This species has been figured under the names of *Atragene austriaca* and *A. sibirica*, but both names are now sunk under *C. alpina*, the Siberian form being the one with white flowers and called var. *alba*.

**C. APIIFOLIA.**—A vigorous climbing species with ternate leaves, growing perhaps 10 feet high, the panicles of flowers produced in August and September. The flowers are each about three-quarters of an inch across and dull white. A native of Japan and China. Closely allied to *C. apiifolia* is *C. brevi-*

*caudata*, the only difference between them, indeed, that I have been able to fix on being the pinnate or biternate leaves of *C. brevicaudata*. Both were originally described by De Candolle, and both are included in Forbes' and Hensley's "Index Floræ Sinensis," so presumably they are distinct. They belong to the group which comprises *C. Vitalba*, *C. virginiana*, &c.

**C. AROMATICA.**—There appears to be some doubt as to whether this is a garden hybrid or a wild plant; if the latter, its native country is not known. It is certainly closely allied to *C. Viticella*, and if it be a hybrid, that species must be one of the parents. In nurseries and gardens it is often grown as *C. cerulea odorata*. It is a slender plant, growing 6 feet or 7 feet high, the leaves consisting of three to seven ovate, untoothed leaflets. The flowers are solitary and terminal and from 1½ inches to 2 inches in diameter, the narrow reflexed sepals of a rich purplish blue. The great charm of this plant is in the sweet, delicate, and slightly aromatic odour of its flowers, which are very freely borne during late summer and early autumn.

**C. CAMPANIFLORA.**—Although this has rather small flowers it is very distinct. The flowers are bell-shaped, each about 1 inch in diameter, with the pointed tips of the sepals recurved. The colour is a pale violet or almost white. This charming species is a native of Spain and Portugal, and will climb 10 feet to 15 feet high. The flowers are very freely borne, and against the deep green, often finely-divided foliage they are very effective.

**C. CALYCINA** (*C. balearica* of Richard).—Although this species can be grown outside in the southern and milder parts of Britain, it is far from being as hardy as the majority of the Clematides here dealt with are. It is a native of Minorca and Corsica, but was introduced to this country from Paris by Thouin, who sent it to Kew in 1783. It is evergreen, and has dark brown, angled stems. During the winter the foliage acquires a fine bronzy hue. The flower is 1½ inches across and of a yellowish white, stained inside with oblong, irregular, reddish-purple spots. It flowers as early as December, and continues more or less in bloom up to March. In the London district it ought to have the shelter of a wall to get it to flower well, although at Kew it has been grown in the open without any particular shelter for many years. It is not a common plant, but is well worthy of the notice of gardeners, especially in the south-western counties and similarly mild districts. It was cultivated sixty years ago at Abbotshury, in Dorsetshire, and may possibly be still grown in that garden, where so many tender shrubs thrive in an extraordinary manner. From its near ally—*C. cirrhosa*—it differs in its narrower and more divided foliage.

**C. CIRRHOSA** (*C. balearica* of Persoon).—Nearly allied to *C. calycina*, this species has been much confused with it, owing to both of them having been called *balearica*. *C. cirrhosa*, however, if it comes from the Balearic Islands at all, is not confined to them, but is a native also of various parts of Spain, and, crossing the Mediterranean, is found also in the neighbourhood of Algiers and on the mountains of the Atlas range. The first recorded discovery of the species was in Andalusia by Clusius. Philip Miller cultivated it in the Apothecaries' Garden at Chelsea, and observes that it endured the winters there for forty years, but it is more tender than most of the Clematides here mentioned, and should have the protection of a wall. It is evergreen. The flowers are dull white or cream coloured, downy outside, smooth within, and about 1½ inches in diameter. In South Europe it is said to climb over big trees, but it grows only some 8 feet or 10 feet high in these colder latitudes.

**C. COCCINEA** (*C. texensis*).—This is nearly allied to *C. Viorna*, and was at one time regarded as no more than a variety of that species. From it, however, *C. coccinea* is easily distinguished by its red (usually scarlet) flowers and glaucous foliage. As a garden plant it is also superior. Its stems grow some

6 feet to 10 feet high, and as a rule in this country die back to the ground in winter. It is a native of Texas, and, as may be judged from its habitat, is not so hardy as *C. Viorna*. The flowers are borne singly on a peduncle 5 inches or 6 inches long, and the colour varies from rosy carmine to scarlet; they are swollen at the base, but narrow towards the top, where, however, the tips of the four sepals are recurved. These sepals are very thick and somewhat leathery and about 1¼ inches long. The species was discovered by Mr. Buckley in Texas in 1859, and was introduced to England some nine years later, but it appears to have been noticed by Dr. Lindheimer in the same State in 1850. A larger-flowered variety is known as var. *major*. Quite recently this species has come into notice as the parent of a pretty race of hybrid Clematides sent out by Mr. G. Jackman, of Woking, which have been shown at the Drill Hall meetings. Herr Max Leichtlin some years ago raised a hybrid between it and *C. lanuginosa*, and M. Morel also has crossed it with *C. Piteheri*.

**C. CONNATA.**—This species, at present very uncommon, is a native of Northern India, being found on the Himalayas between Hazara and Sikkim at 4000 feet to 10,000 feet altitude. It is a climber with stout woody stems; the leaflets (of which there are three or five on each leaf) are 3 inches to 5 inches long, coarsely toothed, or sometimes more or less three-lobed. The flowers are bell-shaped and appear during autumn. The sepals are of a clear light yellow, and have the pointed tips recurved. Each flower is about one inch long, and is followed by silvery-grey plumose fruits.

**C. CRISPA.**—Many of the Clematides show a great tendency to vary, but none perhaps more than this; the consequence is that the nomenclature connected with the species has been very perplexing. In London's time the names *crispa*, *cordata*, and *cylindrica* were all considered to represent different species, and Lindley in his *Botanical Register* devoted three or four pages to an attempt (and not a very successful one) to establish the identity of each. In these latter days the difficulty has been overcome by the simple and effective process of lumping the whole of them under the name *crispa*, and anyone who studies the figures will admit it is the only rational one. *C. crispa* consequently applies to a number of plants alike in all essential characters, but differing in the shape of the leaves and in the size and colour of the flower. The leaf consists of three, five, or more leaflets, which vary in outline, and are sometimes undivided, sometimes three or five-lobed. The calyx is cylindrical or bell-shaped, and from 1 inch to 2 inches long, the upper part of each sepal spreading. The colour is purple margined with white, or in some forms pale lilac. The flowers are fragrant and appear in June, continuing up to autumn. Some of the forms are bright in colour and pretty, but others are amongst the least effective of the shrubby Clematides, the thick, heavy sepals being of a dull purple. A native of the eastern United States.

**C. DOUGLASSI.**—A species hailing from the west of the Rocky Mountains, and discovered by David Douglas, after whom it is named. It is at present scarcely known in English gardens. In general habit it agrees with *C. integrifolia*, *Fremonti*, &c., but instead of having simple, has deeply divided leaves. The flower is solitary on a short terminal stalk and is bell-shaped, 1 inch long, the sepals being recurved at the tips and of an intense purple inside, paler without.

**C. FLAMMULA.**—Although not a native of Britain, this species has been in cultivation here for over 300 years, and is mentioned in Gerard's "Herbal." It is found wild in Central and Southern Europe. A vigorous grower, it is still not so robust and rampant as *C. Vitalba*. Its leaves are of a rich dark green and remain fresh till well into the winter. The flowers are small (half-inch to three-quarters of an inch across) and appear in late summer and autumn on numerous axillary and terminal panicles. They are of a clearer creamy-white than those of *C. Vitalba*, and have a more

decided and Hawthorn-like fragrance. The fruit is white and feathery. This is a very variable species, especially in the size and shape of the leaflets and in the flower panicles, some of which are large and with numerous blossoms, whilst in other forms the panicles are comparatively few-flowered and scarcely branched at all.

*C. FLORIDA*.—Like *C. lanuginosa*, *C. patens* and *C. viticella*, this species is the type of a garden race of Clematis, only much less numerous and important than any of the others. It is a slender

*C. FREMONTI*.—In the Western United States of North America this species may be said to represent the *C. oehroleuca* of the Eastern States, but whilst the latter has been cultivated here since 1767, *C. Fremonti* is a comparatively recent introduction. Its herbaceous stems are from 1 foot to 2 feet high, rarely branched, and carry numerous undivided leathery leaves, 3 inches or 4 inches long, without stalks; the margins are entire or nearly so. The flowers are terminal and drooping, the thick, purple, lanceolate sepals

very thick, brown wool, and the sepals themselves are of a reddish brown colour and also very downy. The flower (which appears in July) is bell-shaped and upwards of 1 inch long, with the points of the four sepals recurved. The fruit forms a thick globular head, 1 inch across, of very plumose tails. Its habitat extends from the north of Asiatic Russia to the Amur region and the Sachalin and Kurile Islands. It was first discovered by Turczaninow in Kamtschatka.

*C. HENDERSONI* (*C. Eriostemon*).—This is considered to be a hybrid between *C. viticella* and *C. integrifolia*, and was raised in 1835 by Mr. Henderson, nurseryman at that time at Pine-apple Place, St. John's Wood, but apparently no record of its origin was kept. The inference as to its parentage has been made because of the resemblance its stems and general habit bear to those of *C. viticella*, whilst its flowers and leaflets follow those of *C. integrifolia*. The plant grows to a height of 8 feet or 10 feet. The flowers are 2½ inches or so across and of a deep bluish purple; the four sepals are spreading, but reflexed at the tips. The flowers appear from June to September and have a faint, sweet perfume.

*C. HERACLEEFOLIA* (*C. tubulosa*).—This species may be taken as the type of a group of herbaceous or slightly woody Clematises found in China and Japan, &c., and of which, according to Forbes and Hemsley, the plants known as *Davidiana*, *Hookeri*, *stans*, *Lavalléi*, and *Savatieri* can only be considered as varieties. Specimens representing the extremes of the group are distinct enough from each other, but they are so linked together by intermediate forms, that it is impossible to draw a separating line between them. The typical *C. heracleefolia* as represented at Kew is a dwarf, sturdy plant under 2 feet high, with large leaves and short-stalked corymbs of flowers of a Hyacinth-like shape and of a purplish blue colour. Much superior to it as a garden plant is the variety *Davidiana*, which often ranks as a species (*C. Davidiana*). Its stems are about 4 feet long, but are rarely strong enough to stand erect without support. The leaves are often of striking dimensions, some of the largest leaflets measuring 6 inches in length by nearly as much in width, and thus the largest of any of the cultivated Clematises. They are coarsely toothed. The flowers are produced in dense heads, borne on long stalks and accompanied by two or more bract-like leaves, but they also frequently appear in short, closely packed clusters right in the axils of the leaves. Each flower is three-quarters of an inch long, the points of the sepals reflexed and resembling a Hyacinth blossom; the colour is a bright lavender-blue. This variety was introduced to France a little over thirty years ago by the Abbé David, who had discovered it in the north of China. It is a useful and an ornamental plant, flowering during September and October, and well worth growing in any mixed herbaceous border.

*C. INTEGRIFOLIA*.—Over 300 years have passed since this species was introduced to Britain; it is, therefore, one of the oldest Clematises in cultivation. It is herbaceous, 2 feet to 3 feet high, its erect stems furnished with leaves 2 inches to 4 inches long and stalkless, or nearly so. The flower is solitary on its stalk, but several of them are produced from the top of the stem and from the axils of the uppermost leaves. The flowers are blue, pendent; the sepals about 1 inch long. It is a European species, and flowers from June to August.

*C. JACKMANI*.—This plant originated in the nursery of Messrs. G. Jackman and Son at Woking, being a hybrid between *C. lanuginosa* and *C. Hendersoni*. The cross was made in the summer of 1858, and seeds from it germinated in 1860, and the plants flowered two years later. A theory was afterwards started by Lavallé in his Monograph of the large-flowered Clematises that the *C. Jackmani* so-called was not a hybrid at all, but a Japanese species—*C. hakonensis* of Franchet and Savatier. The positive evidence, however, of Mr. G. Jackman (*Gardeners' Chronicle*, Feb. 23, 1884) and that of the late Thomas Moore, an authority on the garden Clematis, were sufficient



The yellow Virgin's Bower (*C. orientalis*). From a photograph sent by Miss Maurice Perkins, Schenectady, New York. (See p. 502.)

climber, with stems growing 9 feet to 12 feet long, with very variously divided leaves. The flowers are each 2 inches to 4 inches across, flat and fully expanded, the five or six sepals being of a creamy white and the tuft of stamens purple. It is a native of Japan, and was first made known by Thunberg, but is said to have been introduced by Dr. Fothergill about 1776. There is a double-flowered variety and others with violet or bluish-tinted flowers.

being an inch long with recurved lips. The tails of the fruits are downy when young rather than feathery. The species, which extends from Missouri and Kansas to the mountains of Colorado, was discovered by Fremont.

*C. FUSCA*.—A sub-shrubby or nearly herbaceous species, with decumbent rather than naturally climbing stems. When given support, however, it grows 6 feet or 8 feet high. The flowers are solitary on short stalks, covered with a short,

to dispel the idea. Among the numerous hybrid Clematises that have since been raised, the old *C. Jackmani* holds a high place. Its flowers are 5 inches to 6 inches across, and the sepals (four to six in number) are of a deep velvety violet-purple, making it one of the showiest of all hardy climbers that flower during summer and autumn.

*C. LANUGINOSA*.—Among the many plants upon whose introduction to cultivation the fame of Robert Fortune will rest, few have held a more important place in the horticulture of the latter half of the nineteenth century than this Clematis. It was discovered by Fortune in China, near Ningpo, in 1850, and again by Hancock in the same neighbourhood in 1877. As these are the only recorded instances of its being found wild by European collectors, it is probably a plant with a restricted distribution. It grows only some 5 feet or 6 feet high, and is one of the dwarfiest of the climbing species. The leaves are either simple or consist of three leaflets, which are heart-shaped and covered beneath with the greyish wool to which the specific name refers. The flowers are the largest of any of the true wild types, measuring 6 inches across (considerably more, of course, in the selected hybrids and varieties produced under cultivation), and the sepals (usually about six) are flat and overlapping and of a pale lavender colour. It is to this species more than to any other that the popularity and beauty of the garden varieties of Clematis are due. All the finest varieties in cultivation (including *Jackmani* and its section) contain more or less of the blood of *C. lanuginosa*, and the flowers range in colour from pure white to deep rich purple. Its natural flowering time is from July to October.

*C. LIGUSTICIFOLIA*.—Although nearly allied and very similar to *C. virginiana*, this species may at once be distinguished by the leaves consisting of five leaflets instead of three. Each leaflet is 1½ inches to 3 inches long, three-lobed or very coarsely toothed. The flowers (male and female ones of which are borne on separate plants) appear in axillary or terminal panicles and are white, three-quarters of an inch across, and on the female plants are followed by seed vessels that have pubescent tails 1 inch to 2 inches long. The variety *californica* is distinguished by its smaller, tomentose leaves. It is one of many examples that occur in the North American flora where a widely-spread species is found to be glabrous on the eastern side of the continent, but tomentose or even woolly on the drier and hotter western side. This species will climb to a height of 30 feet.

*C. MONTANA*.—This is one of the most beautiful of all the Clematises, and one which every garden should possess. It flowers during May, and when covered with its white flowers is one of the loveliest of all hardy climbers. It is a native of the Himalaya, and was first brought to Britain by Lady Amherst in 1831. It is quite hardy in the southern parts of the kingdom, and may frequently be seen covering walls to a height of 15 feet or 20 feet. The flower appears singly on a stalk 6 inches long, but several flowers are produced from one leaf axil; the sepals are pure white, and the whole flower, which bears a strong resemblance to a white *Anemone*, measures 1½ inches to 2 inches in diameter. The species has been called *C. anemone-flora*.

*C. OCHROLEUCA*.—A herbaceous species related to *C. Fremontii*, but confined to the eastern side of North America, whilst the other is as purely western. Its stems are 1 foot to 2 feet high, its leaves silky beneath, especially when young. The flower is solitary, terminal, the sepals yellow outside, cream-coloured within. From *C. Fremontii* this species is distinguished by the tails of the fruit being distinctly plumose. It was said by Asa Gray to be rare in a wild state.

*C. ORIENTALIS* (*C. graveolens*, *C. flava*).—A vigorous climber, which grows 12 feet or 15 feet high. The leaves are thin in texture and of a pale and rather glaucous green. It flowers abundantly during August and September, the four sepals being of a yellow colour, tinged with green, and the whole flower measuring about

1½ inches across. There is a sweet, but not very strong fragrance. The fruit heads are rendered very handsome by the tail (1 inch long and covered with silky hairs) that is attached to each seed vessel. The species has a wide distribution, and is found in various parts of Northern Asia; it extends from Persia through North India (where on the Himalayas it reaches altitudes of 12,000 feet) to Manchuria. According to Loudon it was introduced in 1731.

*C. PANICULATA*.—In Britain, this species, although growing freely, has not yet proved of any great value as a flowering plant; this is due probably to the little sunshine our climate affords as compared with the United States, for across the Atlantic it is described as perhaps the most beautiful of all the Clematises. It is a native of China and Japan, and was originally discovered and named by Thunberg, who lived in Japan 120 years ago. It is only lately, however, that it has appeared in cultivation, although, being mentioned by Loudon as a variety of *C. flammula*, it may possibly have been in cultivation at an earlier date, for it is quite a common plant in Japan. It is a very vigorous climber, growing to a height of 30 feet or more. The leaf consists of three or five leaflets, which vary from 1 inch to 4½ inches in length, and are dark green, smooth and glabrous. The flowers are borne in axillary and terminal panicles, and each 1 inch to 1½ inches across, with a charming Hawthorn-like fragrance, the four sepals being of a rather dull white. It is perfectly hardy at Kew and flowers during September, but with nothing like the profusion that makes it so beautiful a climber in America. By planting it against a sunny wall its best qualities would perhaps be brought out. If it flowered with half the freedom of the American specimens it would be worth its room.

*C. PATENS*.—Next to *C. lanuginosa*, this is perhaps the most important of the wild types of Clematis. Even less is known of it in a wild state, but it is certainly a native of Japan (having been found on the island of Nippon), and possibly of China also. It was introduced from the former country about sixty years ago by Siebold, who obtained it in the gardens near Yokohama, where it had, no doubt, been long in cultivation. It is a taller grower and has more slender stems than *C. lanuginosa*, the leaves consisting of three or five divisions that are smaller and narrower than those of its fellow species. The sepals are from six to eight in number, narrow in the form originally introduced, and of a delicate mauve colour, but the varieties subsequently obtained from it under cultivation have flowers much larger, the colours varying from white to deep violet and blue. Its value as one of the parent species of the garden Clematis is due not only to its beauty, but more especially to its flowering as early as May and June, and thus lengthening the season considerably.

*C. PITCHERI*.—Apparently this is a variable species, for there are at Kew three or four forms easily distinguishable, but unmistakably belonging to the one species. The leaves are usually made up of three pairs of leaflets, the petiole ending in a midrib. The flowers are terminal on the main shoots and pitcher-shaped, being broad and swollen at the base, narrow at the centre where the sepals press closely round the bunch of stamens, but have the tips expanded and recurved. The largest flowers are 1 inch long and three-quarters of an inch wide at the swollen base, of a purplish blue outside, and in the typical form the recurved tips of the sepals are yellowish. The fruits are borne in a closely packed bunch, each one narrowing at the top into a twisted tail, 1 inch long, which is not feathery, but covered with a short close tomentum. The fruits are of a reddish purple colour. The species is a native of Colorado and other Western United States, and is sometimes known as *C. coloradensis*. It is a pretty and distinct plant, and with us is about 9 feet high at present, but will probably grow taller. It has been confounded with *C. coccinea*, through the latter being figured in the *Revue*

*Horticole* as *C. Pitcheri*. *C. coccinea* is, of course, to be distinguished by its red, never purple, flowers.

*C. P. LASTOSTYLIS*.—In this variety the sepals have but little of the yellow colour seen in the type, the recurved portion of the sepals being of a deep purplish blue. The fruits, too, are larger and of a richer red colour.

*C. RECTA* (or *C. erecta*).—This is one of the best herbaceous species, its tufted stems growing about 3 feet high and producing from June to August numerous flowers on a large, branching, terminal corymb. They are white, sweetly scented, and each about 1 inch across. The species has been grown in Britain for over 300 years, and is a native of South and Eastern Europe. A handsome double-flowered variety (*flore-pleno*) was sent out by Mons. Lemoine a quarter of a century or more ago.

*C. ROBERTSIANA*.—One of the most recently discovered of the Clematises, this is not yet, so far as I know, in cultivation in this country. It was discovered by Dr. Aitchison in the Kurram Valley in June, 1879, and was subsequently described in the *Journal of the Linnean Society*, vol. xviii. There is every probability of its being hardy in this country, as it occurs at altitudes of 10,000 feet to 11,000 feet on the mountains of Afghanistan, &c. The flower occurs singly on an erect peduncle, but is itself nodding, the sepals being of a pale lemon-yellow, and the whole flower 3 inches to 5 inches in diameter. The large flowers and their unusual colour make its introduction very desirable; botanically also it is of interest as affording a connecting link between Clematis proper and the section *Atragene*. The flowers have none of the petals or antherless staminodes of the *Atragene* group, but otherwise, both in flower and foliage, the species bears a great resemblance to *C. (Atragene) alpina*.

*C. STANS*.—This is one of the group to which *C. heracleaefolia* (*C. tubulosa*) and its variety *Davidiana* belong, and under that species it is sometimes placed as a variety. It is convenient, however, to regard it as a species, especially as it has been figured as such in the *Botanical Magazine*, t. 6810. It is a herbaceous plant, growing with us 4 feet or 5 feet high, with dark green pubescent leaves, the separate divisions of which are roundish, toothed, and more or less three-lobed. The flowers are not borne in such dense heads as in *L'Abbé David's Clematis*, but often in a somewhat verticillate manner on a large terminal panicle, frequently also in clusters close in the leaf axils. Each flower is about three-quarters of an inch long, pale blue, and of the hyacinth-like form common to this group of Clematis. This is one of the least showy of Clematises, but is worth growing for its striking foliage and free growth. Its late flowering (September and October) is also a point in its favour. A native of Japan.

*C. VERTICILLARIS* (*Atragene americana*).—At an earlier date, when the Clematises and *Atragenes* were kept separate, this was known as *A. americana*, under which name most of the published figures have appeared. It is a climber with woody stems 8 feet to 10 feet high or more. In spring a pair of leaves is developed at each of the opposite buds on the stem, thus giving the appearance of a verticillate arrangement of four leaves—hence the specific name. The flowers appear on one-flowered peduncles, and are of a bluish purple and from 2 inches to 3 inches in diameter. The tails of the fruit are plumose. The species appears to have first been raised by Messrs. Loddiges in 1797. According to Dr. Asa Gray, it is a native of the rocky places in mountainous districts in Maine, Western New England, Virginia, Wisconsin, &c. It has in late years been much neglected and is now a rare plant in English gardens.

*C. VIORNA* (the Leather Flower).—Although this is one of the oldest of the American Clematises in cultivation (having been introduced in 1730), it is not a common plant, being, indeed, one of the least attractive in the genus. It is not very vigorous in habit, although growing 8 feet or 10 feet high. The flower is pitcher-shaped and solitary on a long stalk, and the four sepals are

each 1 inch long, very thick and leathery, with the tips usually recurved. The colour is a dull reddish purple, sometimes greenish outside and whitish or greenish yellow inside. It flowers from June to August. A native of the Eastern United States.

**C. VIRGINIANA.**—This is the common Virgin's Bower of the United States and Canada, and may be regarded as the New World representative of our *C. Vitalba*. Its leaves have three—*C. Vitalba* has usually five—ovate, pointed leaflets, which are somewhat heart-shaped at the base and have the margins coarsely toothed and lobed. The flowers are borne in flat panicles, the sepals being spreading, thin, and dull white. It is a common and widely spread plant in Eastern North America, extending from Canada to the Southern United States. It may often be found to bear either male or female flowers exclusively. It was introduced in 1767, and although hardy enough, is not in Britain so strong and woody a grower as our native Traveller's Joy.

**C. VITALBA** (Traveller's Joy, or Old Man's Beard).—There is no climber native to Britain that gives so near an approach to tropical luxuriance of vegetation as this. In ordinary positions it grows 20 feet to 30 feet high, and, according to London, as much as 50 feet to 100 feet high in sheltered or very favoured situations. It is one of the best plants for covering unsightly buildings or mounds, as well as for forming covered ways, arbours, &c. It grows so luxuriantly, that even in winter when destitute of foliage its naked stems are sufficient to prevent an appearance of bareness, and the greater light its deciduous habit admits is often an advantage during our long sunless winters. The panicles are axillary and bear numerous dull white flowers, three-quarters of an inch or so across, with a faint odour resembling that of Almonds. It is, perhaps, most beautiful when covered with its white fruits, the seeds having long feathery tails whose silvery grey colour gave rise to the name of Old Man's Beard. The French name of *Herbe aux Gueux* (Beggars' Plant) arose through that fraternity using the acrid juice of the plant to produce ulcerous wounds of the flesh as a means of arousing pity. The commonest name, that of Traveller's Joy, carries a pleasanter suggestion with it, and apparently originated with Gerard, who says this Clematis is "esteemed for pleasure by reason of the goodly shadow which it makes with its thick bushing and clyming, as also for the beauty of the flowers and the pleasant sent or savour of the same. . . . and because of its decking and adorning waies and hedges where people travel thereupon have I named it Traveller's Joy."

**C. VITICELLA.**—This is the type of one of the leading races of garden Clematis, and is also one of the original species from which the Jackmani group originated. It is a native of Europe, and is known to have been in cultivation in England as long ago as 1569. It is a climber, growing from 8 feet to 12 feet high. It blossoms during July, August, and September, its abundant flowers measuring  $1\frac{1}{2}$  inches to 2 inches in diameter, the four sepals blue, purple, or rosy purple, and the fruits have only short tails, which are devoid of the plumose covering so often seen in this genus. There are now numerous varieties of the species superior to it in size of flower, and offering also a variety of shades. The most distinct in habit is var. *nana*, which grows little more than 1 yard high, and is rather a bush than a climber. It was raised in Paris by Mons. Carrière. Both the single and double forms of this species were grown by Gerard, who says "they grow in my garden and flourish exceedingly." W. J. BEAN.

*Arborum, Ker.*

**Campanula persicifolia.**—This Campanula, especially its white form, is, as indicated by Mr. Arnott (p. 402), of the greatest value for indoor decoration. Even in the hottest weather the old single white lasts in water for many days without showing signs of deterioration, while its double

variety is even more enduring. The newer introduction, *C. p. alba grandiflora*, as far as I have seen, bears out your correspondent's description as having petals of a flimsier texture. Possibly a cross with *C. latifolia* or *C. grandis* may have been instrumental in impairing the substance of the petals, which in the old *C. persicifolia* are thick and almost of a parchment-like consistence; whereas those of *C. latifolia* and *C. grandis*, both most attractive garden plants, are of so unsubstantial a nature, that the flower-spikes are of little value for cutting. *C. persicifolia* and its varieties succeed well in heavy loam in this neighbourhood.—S. W. F., *Torquay*.

#### Mesembryanthemums in the garden.

The illustration and note on *Mesembryanthemum roseum* (p. 439) remind one of the brilliant effect afforded by these flowers where they really succeed. Light soil and a sunny situation seem best suited to their requirements. In my own garden, which lies low, and the soil of which is heavy and damp, *Mesembryanthemums* refuse to bloom, while at Kingswear, on the banks of the river Dart, where the soil is light, they flower most abundantly and are a glorious sight during the summer. There, many varieties are grown, from the brightest vermilion, ranging through crimson, rose, orange, and flesh-coloured to white. Most of them have proved hardy, but the large *Mesembryanthemum* alluded to by Mr. Woodall has been killed back on one or two occasions. At Alibotsbury Castle rock garden, overlooking the Chesil Beach, a large number of *Mesembryanthemums* are grown and succeed remarkably, and one of the features of the Isles of Scilly in the summer is formed by the gorgeous breadths of colour produced by these vividly tinted flowers.—S. W. F., *Torquay*.

**Herbaceous Lobelias.**—It was with great pleasure that I read "R.'s" note on the above (page 441), more than confirming, as it did, my theory expressed on pages 362 and 463, that the hardness of these plants depends rather upon some quality in the soil than upon the temperature to which they are exposed. From the reminiscence of a winter spent in Suffolk in my boyhood, I have no doubt that in the coldest part of that county during the severe winter of 1894-95 the Lobelias had almost as trying an ordeal as they would have experienced anywhere in England, yet, without the slightest protection, they came through it uninjured and flowered profusely the same season. This appears to me to be proof positive that severe and long-continued cold will not kill them, while in my case excessive damp has no injurious effect upon their constitution. It seems, therefore, that growers who fail to winter these plants in the open will, for the future, have to ascribe their ill-success to some other cause than excess of cold or moisture. Whilst I had only cultivated these Lobelias in South Devon, the theory that I had formed was unavoidably wanting in authority, but now that it is borne out from the coldest part of Suffolk I have little doubt but that it is correct.—S. W. F., *Torquay*.

**Tigridias.**—When planted in light soil in sheltered nooks of the south-western counties these Mexican bulbs may be allowed to remain in the ground during the winter. Where this method of culture is followed it is always safer to mulch the bed with cocoa-nut fibre or ashes. In heavy, damp soils the bulbs should be lifted annually in November, hung up in bunches by their foliage, like Gladioli, and when dry stored in sand. "D.'s" experience (p. 400) as to the deterioration of stored bulbs is not an uncommon one, but the plan advocated is the best that can be suggested. If purchasing for planting, it is well to delay this till the end of March, and to inform the firm from which the supply is being procured that large, plump bulbs must be sent or none at all. The commencement of April is the best time for planting. Light soil is the best suited for Tigridia culture, and, until a few months ago, I should have added, dry. Last August, however, I saw many wonderful clumps of *Tigridia grandiflora* over 2 feet in height with blossoms exceeding 7 inches in diameter, growing close to the margin

of a sheet of ornamental water. The position evidently suited them, for I never saw more vigorous specimens. In my former garden, twelve miles from where I now write, Tigridias lived in the light soil winter after winter without the slightest protection, but I was never able to preserve the herbaceous Lobelias. In my present garden, where the soil is heavy and damp, the Lobelias, unprotected in the open ground, have withstood 20' of frost with impunity, but Tigridias left in the ground never appear again. Such losses and their compensating gains indicate the advisability of each one being the compiler of his own "index expurgatorius," a subject which was the theme of a lengthy correspondence during the past spring.—S. W. F., *Torquay*.

#### FLOWER GARDEN NOTES.

**MULCHING.**—I have often called attention to the advisability of a winter mulch for all herbaceous borders, and although in some soils and situations the practice would not seem to be necessary, there is no mistake about the value of it when dealing with a soil that is naturally light and dry. I refer to the subject at the present time because conditions point to the necessity of getting it on as soon as possible. In any lifting operations that have taken place this autumn, whether of ordinary trees and shrubs, fruit trees or herbaceous plants, the dry nature of the soil is very apparent, and unless we get some heavy winter rains to compensate for the long spell of dry weather, flower borders are hardly likely to be seen at their best in 1898, especially if the spring and early summer prove hot and dry. To prevent, therefore, the drying out of such borders as far as possible, a heap of fairly good manure has already been well broken up, and this will go on the borders with the first spell of frost, or at any time when the wheeling can be carried out under favourable conditions. For all small autumn-planted things, peat moss manure will be substituted for the coarser compost, whilst for those things where the mulch takes the form of a slight winter protection rather than a stimulant, or as an aid to retain moisture, I use as far as procurable the foliage of *Taxodium distichum*. It is a capital preservative and a clinging material, that is, if a coating of say 3 inches is put on. It lies close together without blowing about.

**SOME DIFFICULTIES AND DISAPPOINTMENTS.**—Whilst the note on page 441 is interesting as a testimony to the hardness of *Lobelia cardinalis*, it increases the difficulty as to the conditions essential for the plants to winter safely outside, because the alternative suggested in the matter of soil is not responsible for the necessity of housing. Instead of a rather heavy moist soil my plants are in a dry sandy loam, and, like "R.," I have never experienced any loss or indeed the slightest sign of the plants going to the bad. They always get their winter mulching, but for several seasons this has not been put on with any idea of protection, but, as stated earlier in these notes, to retain moisture and as a slight stimulant. That the plants do thoroughly well is shown by the fact that when there is reason to lift and divide for the purpose of increasing the stock either in autumn or spring, a perfectly dense mass of healthy roots is always found. Would the cause of winter failures arise from some agent in the soil that is responsible for root-destruction and a consequent weakening of the plants? Again, the difference in Carnations coming safely through the winter is even more marked, because correspondence has shown that, given nearly similar soil and climatic conditions both as to temperatures and the prevalence of fog, the loss in one case is practically *nil*, and in another it would be so heavy as to necessitate potting up layers and keeping them under cover. In a bulb catalogue recently to hand I read in connection with Daffodils that "they will do in any soil." This is not so, at least if, as one infers from the context, the writer is thinking about naturalisation without any idea of altering the soil. There are soils in which Daffodils may exist, but doing well is quite another

matter; they degenerate alike in the size and quality of the flowers and the strength of the grass and any sign of reproduction is practically absent. A very little matter will often make all the difference. An instance is to hand in the pleasure grounds here where the soil is apparently of the same nature all throughout, a peaty sand running out into pure sand at depths varying from 6 inches to 12 inches below the surface. In some places Daffodils are a failure, in others fairly successful—that is, as good as one can expect. The difference is to be found, not in the varying depths of soil, but in the nature of the sand. Where this is light and dry and runs easily through the fingers naturalisation is a failure, but where it is on the moist side at a depth of 6 inches, and there is just a suspicion of clinging ever so lightly to the hand when compressed, the results are fairly good. Again, given a soil that is naturally of the above description, and even after a lot of making is light and dry, considerable discrimination must be used in dealing with plants that are recommended to be tried on warm dry borders. There are certain things, like Achilleas, Iberis, the various forms of Thymus, alpine Phloxes and others, that may be planted in such positions and in a soil of this nature with the certainty that they will do well, but there are others, (*Zauschneria* and *Dracocephalum* are two species that are suggested) that are not at home, but are seen to much better advantage where there is a greater depth of better soil. Writing of some disappointments reminds me to thank Mr. Arnott for his note on *Bocconia carnea*, and to suggest the great advantage if all who have an opportunity of growing new things would give the benefit of their experience. It should lead to observations that would give us an insight as to the requirements of things not as yet common on hardy plant borders alike in the matter of soil and situation, and also how best to plant them so as to harmonise well with their surroundings.

Claremont.

E. BURRELL.

### ANTHOLYZA PANICULATA.

THERE are many South African plants of striking beauty in the garden, and it is a matter for regret that the hardiness of a considerable number must be looked upon with suspicion. We have only to point to the *Gladioli*, the *Montbretias* and a few other well-known bulbous plants to show what value is possessed by these flowers. The hardiness of very few is admitted; that of more is doubtful; and a greater number can only be recognised as plants which cannot be trusted to endure the hardships of our winters and must be lifted in autumn for replanting in spring. There is an increasing desire to find among these members of the *Iris* and *Amaryllis* families some of recognised hardiness which would give us a welcome change from the crowd of composite flowers we have then in bloom. The *Montbretias* are invaluable, but there is a likelihood of there being too much sameness among them and they give but little variety of form. The *Antholyzas*, and especially *A. paniculata*, may thus well be brought more prominently before the public as sharing the beauty of the *Montbretia*, with a distinct appearance of their own which will be their passport into many gardens.

Some of the catalogues—especially those from Holland, where the winters are more severe than ours—have helped to arouse doubt in the minds of some regarding the hardiness of this *Antholyza*. It is often marked as requiring protection in winter. This is an obstacle to many growers of hardy flowers, who know from experience that this winter protection is often forgotten until it is too late. Frost has entered and stolen the steed before the door was locked. Yet I venture to think from personal observation that the panicked *Antholyza* is in many gardens as hardy as a number of

flowers about which no doubt exists in the minds of their owners. As "The English Flower Garden" says of the genus, "they are hardy in a warm, sheltered border well drained, in rich sandy loam," and in even less carefully selected places will often give much satisfaction by the way in which they thrive. As far north as Stirlingshire I have seen *A. paniculata* not only thriving, but increasing into great clumps with noble leaves and a profusion of spikes of flower, and this, too, in borders neither warm nor sheltered. The *Antholyza* is a fine plant even when out of bloom unless when at rest for the winter. The great, ribbed and plaited *Iris*-like leaves are very handsome. As a fine-foliaged plant alone it may well claim a place from its sub-tropical appearance, and when its tall flower-spikes come into full beauty in autumn it looks distinct from anything else in bloom at the time.

We are told that the name *Antholyza* is derived from the words *anthos*, a flower, and *lyssa*, rage, in reference to the opening of the flowers which resemble the mouth of an enraged animal. One cannot quarrel with the fancy of the namer of the plant. A look at the curiously shaped red flowers reminds us of Ruskin's remarks on the form of flowers in "The Queen of the Air," where, in Lecture ii., 87, he says: "Then the spirit of these *Draconidae* seems to pass more or less into other flowers, whose forms are properly pure vases . . . it touches . . . the *Iris*, and it points into a *Gladiolus*." The *Antholyza* looks as if it had received a double share of this spirit, so dragon or at least beast-like are its flowers. The dense spikes are many-flowered, and the bright red or red-yellow flowers are well elevated above the leaves.

This *Antholyza* comes from Natal, where it was first collected by Gerard, and is described by Klatt in "Linnaea," xxxv., 379. The corm is large and globose; the leaves are described as being each from 1½ feet to 2 feet long, but this is considerably below the height in many gardens. The stem, which is branched, is from 3 feet to 4 feet in length.

With regard to cultivation, it will be safe to adopt, as a general rule, the spirit of the paragraph quoted from "The English Flower Garden," but it also grows well in some gardens in rather heavy soil. I have also seen it grown with fine effect and in capital condition in the rock garden. It should be planted in late autumn about 6 inches deep. In course of time it may become crowded and require lifting. Should this be necessary, the smaller corms can be separated and the larger replanted together.

In his "Handbook of the Irideae" Mr. Baker describes nine species of *Antholyza* as being Cape species, as distinguished from those from Tropical Africa. It yet remains to be seen if there are many others as suitable for the outdoor garden as permanent plants. The others named by Mr. Baker are *spicata*, *fucata*, *æthiopica*, *intermedia*, *caffra*, *quadrangularis*, *Cunonia*, and *saccata*. Of these I have a few under observation here, but the only one named in the "Hand-list of Herbaceous Plants" as grown at Kew is that under notice. It at all events can be confidently recommended to the admirer of uncommon garden flowers.

*Cursethorn, Dumfries, N.B.* S. ARNOTT.

**Lily of the Valley fruiting.**—The correspondence which has appeared on this subject leads me to ask if any of THE GARDEN readers have observed any difference in this respect between the Dutch and the Berlin types of the Lily of the Valley. I have had the former in this garden for more than thirteen years and it has never fruited,

nor have I seen it in fruit elsewhere. A clump of Berlin crowns planted out a few years ago has, however, fruited annually, although there was apparently nothing in soil or position to account for the difference. This may be merely accidental, but others may be able to say something more definite on the point.—S. ARNOTT, *Cursethorn, Dumfries, N.B.*

**Seedling Carnations.**—There is no doubt but that it pays well to sow seeds of choice strains under glass, sowing in April. Last year I sowed in broad pans and stood them in a gentle warmth. The result was far better germination than would have resulted if seed had been sown outdoors. The seedlings were hardened off in a cold frame, and I had them lifted and shaken out of the soil and carried some distance to plant out into a long border early in June. One watering when planted sufficed to keep them alive. Every plant grew, and but the other day, having to replant the border, which is very open and exposed, I lifted all the plants, now very strong and well branched, with good balls of soil attached to the roots, had the border redug, and then the Carnations were replanted, letting them well down so as to bury the stems. I have every hope that, the air being dry and active and the soil porous, these plants will escape harm from wet or cold, and will bloom finely during the summer. To have obtained so many plants from seed is indeed satisfactory. If but a score out of the number are really good, and each one enables half a dozen layers to be made, how cheaply is a good class stock of Carnations secured. Some seed sown outdoors at the end of April came very thinly, due, perhaps, to the dryness which prevailed. Whilst the first stock gave two-thirds germination, the latter gave but one-third.—A. D.

## GARDEN FLORA.

### PLATE 1150.

#### HIBISCUS SYRIACUS.

(WITH A COLOURED PLATE OF H. S. VAR. TOTUS ALBUS, ETC. \*)

As has been the case with many another long-cultivated plant, the true native country of this *Hibiscus* was for many years merely guessed at. Being mentioned by Gerard as a garden shrub of his time, it has consequently been in cultivation in Britain for 300 years at least, but as lately as 1852 Lindley and Paxton, in the *Magazine of Botany*, stated that its native country was unknown to them. The specific name would imply it to be indigenous to Syria, and Loudon says it is native of that country and Carniola, but although common as a cultivated shrub in that and other parts of the East, there is no evidence of its really being a native of Syria. We now know it to be indigenous to China, and to be spread widely over that country both as a wild and as a cultivated shrub. Dr. Henry has collected it wild in localities as far apart as the central provinces and the island of Formosa. It may also be a native of India, but present evidence points to China as the centre from which it originally spread. Both in China and Japan it has long been used as a hedge plant, and in Japan its fibrous bark is said to make good twine and ropes. A common name for this shrub in nurseries and gardens is *Althea frutex*. This name, which has long been in use, was given to it, says Loudon, because of the resemblance its flowers bear to those of *Althea rosea*, the Hollyhock. Philip Miller in his dictionary calls it the Syrian *Ketmie*.

In the south of England it is perfectly hardy,

\* Drawn for THE GARDEN at Gravetye Manor, Sussex, by H. G. Moon. Lithographed and printed by J. L. Gollart.





much hardier than it was evidently thought to be in the earlier days. Parkinson, 250 years ago, put it down as somewhat tender, and advised that it should "not be suffered to remain uncovered in winter." But it is only one of many instances of a similar nature—the common *Aucuba* began its career in Britain as a stove plant. It is a deciduous bushy shrub with erect branches, and in this country is rarely more than 6 feet to 8 feet high, although Fortune, during his first visit to China, saw plants in the gardens there as much as 12 feet high. On the young wood the bark is green, but on the old wood it becomes light brown or greyish. The leaves vary much in size according to the vigour of the plants and mode of culture, but they are usually 2 inches to 4 inches long. The flowers in the single-flowered varieties are of

albus they are wholly white, as the name infers, and distinct on that account. There is now quite a host of named varieties offered by nurserymen; among them, as being of approved merit (although by no means the only ones), the following may be mentioned: *Azureus plenus*, *albus plenus*, *coelestis*, *Duchesse de Brabant*, *ardens*, *anemonellorus*, *violaceus plenus*, *amplissimus*, *Leopoldi*, *carneus plenus*, *amaranthinus*, *Pompon rouge*.

*Hibiscus syriacus* and its varieties flower in August and September. Where it succeeds well it is undoubtedly one of the most beautiful of autumn-flowering hardy shrubs. For it to be seen at its best a fine sunny September is necessary. It sometimes fails to flower satisfactorily through having been planted in positions where the wood does not thoroughly

This *Hibiscus* is the only hardy shrubby species in that extensive genus (150 species), and in the Mallow family is the one of chief importance among hardy shrubs. Several annual species and herbaceous perennials have at various times been in cultivation, but scarcely one of them has proved of sufficient value to retain its place.

W. J. BEAN.

## THE WEEK'S WORK.

### KITCHEN GARDEN.

At last we have had a touch of frost, which appears to have been general, not much, certainly, but sufficient to leave its mark on all tender crops and put those on the alert who have commenced forcing choice vegetables in pits and frames. It will have necessitated covering the lights at sunset with a double thickness of mats or a thick layer of straw or Bracken. When the forcing of different things has to be done by the aid of portable frames and fermenting material, it is no small gain to select a snug corner of the garden sheltered from searching winds, but exposed to as much sun as possible. The old-fashioned forcing ground, surrounded with a high hedge or fence, has been supplanted by the cheap forcing houses, efficiently heated with hot water. For many reasons the old-fashioned manure frames are not to be despised, as sufficient warmth was created and growth was less likely to feel the sudden changes of weather or the effects of searching wind. The forcing house of course is indispensable in small places where there is not a quantity of stable litter and leaves to be obtained. Such material, however, where at command can hardly be put to a better purpose, and its use in this way prepares it for the dressing of vacant ground later on. It is not only necessary to select a warm corner in which to make up the beds, but one, if possible, out of sight, where the leaves and litter can be carted to. The larger the quantity collected the longer will it last in a warm condition, and frames planted with *Asparagus* roots, *Radishes*, *Carrots* and the like would still be in a suitable condition months hence, when these crops are cleared out to receive *Potatoes*, *French Beans*, *dwarf Peas* and the earliest batch of *Turnips*. Another advantage of selecting such a position is the fact that the longest litter can be utilised at night as a covering, and may be used to any thickness without the annoyance of having it blown about and making the rest of the garden untidy; moreover, it proves cheaper than buying mats where a number of frames has to be covered. The mats too often entail a lot of trouble in keeping them secure during rough nights. A bed of tan forms a capital hotbed, and proves a good substitute for manure and leaves, and is sometimes more easily obtained than the latter. Owing, however, to the shortness of the material it is only fit for filling up brick pits. If it is thoroughly moist and well trodden together it will give off a steady warmth for months after, and prove most suitable for early *Rhubarb*, *Seakale*, or *Asparagus*.

**COLD FRAMES.**—A good range of these is very necessary in which to protect winter salad, *Parsley*, *Cauliflowers*, and other things. Such plants, however, are naturally hardy and resent anything approaching eodding, the lights really only being used to ward off inclement weather. When badly ventilated, with no warmth beneath to expel damp, such things as *Lettuce* and *Endive* are liable to rot off at the collar; therefore the lights should be drawn off for a few hours daily whenever the weather is mild and dry. With *Parsley* the lights should not be used at all unless very severe frost or snow is expected, or it will soon take on a sickly colour and die off. Of course, outside gatherings of this should be made as long as possible, saving that which is in the frames until spring, as it often proves scarcer after the trying winds of March, and before it is possible to have spring-sown plants in



Flower of *Hibiscus syriacus*.

the character common to the Mallow family, the five free petals forming a wide trumpet-mouthed corolla, usually  $2\frac{1}{2}$  inches to 3 inches (sometimes 4 inches) across. Many of the cultivated varieties have double flowers, and there are both single and double forms whose flowers are white, red, blue-purple, variegated or striped with white and red, &c. Besides these variations in the flower there are others in the leaf, and forms are in cultivation whose foliage is variegated with white or yellow. One of the varieties here figured, *totus albus*, is perhaps the best with single white flowers. It was raised on the Continent and first appeared in English nurseries about a quarter of a century ago. Nearly all the varieties of this species of *Hibiscus* have the bases of the petals coloured with some shade of red, but in the variety *totus*

ripen. Shady and ill-drained situations must be avoided, for although hardy enough, it is a sun and warmth-loving shrub. In the northern and colder parts of Britain, where autumn sets in earlier, it ought to be planted against a wall for the protection and better development of the flowers and for the more thorough ripening of the wood. Like most of the Mallow family, this is a vigorous and free-rooting plant, and it should be given a deep, open, and fairly rich soil. Propagation is effected by layering or by putting in cuttings of nearly ripened wood in autumn under a bell-glass in a cold frame. Rarer sorts, if necessary, can be grafted on the commoner ones; the stock being practically identical with the scion, worked plants are not so objectionable as are most trees and shrubs propagated in that manner.

any quantity or size, than during the most severe frost. There is always a demand for Parsley, and it is very annoying to the gardener when not able to produce it; therefore, if not already done, a frame of some kind should be placed over a nice sturdy batch, it being better to cover young plants which are not too crowded than what may at present look a finer bed. When too thick, the foliage soon turns yellow or damps off, and there is a dearth in spring. It is better to place a frame over established plants than to lift and replant them. If replanting has to be resorted to, a fork or spade should be driven well into the soil round each plant and care used in lifting and conveying them to the frame, as it is somewhat difficult to lift the roots with a good quantity of soil attached, without which the plants receive a check, the foliage flags, and months often elapse before new leaves form. Autumn-sown seed of both Peas and Broad Beans will now be pushing through the soil, and some means must be employed to protect the seedlings from birds. It is generally in the early morning that the most mischief is done, especially by pheasants and pigeons, which often play sad havoc at this season, as the young growth is very tempting. Strips of rabbit netting placed over the rows are a good preventive. Should wet weather set in, dry fine soil from the potting shed should be used to mould the young plants up. This will protect the tender growth from cutting winds as well as severe frosts. A few dustings of fine dry ashes occasionally will also check frost striking through the surface soil as well as ward off slugs. A sprinkling of dry wood ashes over the rows when frost threatens prevents its action being so severely felt, while a few bushy twigs placed on either side will also tend to keep the plants safe until the worst of the winter is past. Radishes and sa'ad growing at the foot of a south wall can be easily protected by leaning broad boards against the wall, or branches of Fir or Yew will shield them somewhat during severe weather.

The frost has been sufficiently severe in most gardens to cut down the foliage of Globe Artichokes. Before mulching the crowns with litter or Bracken, a few shovelfuls of ashes should be applied if the ground is of a cold, wet nature. This may prevent them decaying, which is not unusual in some districts, as stagnant moisture often proves more disastrous to the centres of the plants than several degrees of dry frost.

R. PARKER.

#### HARDY FRUIT GARDEN.

PEACHES.—There are various opinions as to the time that these should be pruned, trained, and nailed. Some advocate its being done in mid-winter; others defer it until the last moment, or just as the buds are about to burst, while some loosen the trees from the wall at this time of the year, and tie the branches temporarily to stakes let into the alleys. This is done with the idea of retarding the trees, and they are not fastened back to the wall again until the forward condition of the buds will admit of no further delay. All three methods are good, and the best course to pursue is to adopt that which has been proved by experience to answer best in each individual case. I adopt the first mentioned, and as a rule the training and nailing of the trees are finished by the end of the year. I have adopted this policy for several years past, and have never regretted doing so, as I invariably secure good results in the shape of heavy crops of fruit. When the trees are to be left until late winter or early spring, as in the second case, there is no reason why the pruning of the trees should not be done now. This would simplify matters greatly, as there would then be nothing but the training and nailing to do. In the third case, what pruning is required should be done before the trees are loosened from the wall, as it can then be easily seen what shoots can be cut away and which left. Pruning of Peaches should not be required to the same extent as needed for other fruit trees, for if well managed it simply means thinning out

the wood where too much was left in the trees at the autumn pruning. Preference should always be given in this case to the best ripened and well-budded shoots, cutting out the more immature and those sparsely budded. Apply the same rule to neglected trees, or where far too much wood has been retained, and when cutting back a shoot see that the cut is made at a wood-bud. When pruning is completed, whatever cleansing the trees may require is best done before they are trained out afresh, or before they are loosened from the wall. Brown scale if present will require a strong solution of some insecticide to kill it, but ways and means for coping with these foes have been recently referred to. If nothing but fly has infested the trees during the past season, they may be washed several times with soapsuds by those who feel nervous about using the more efficacious remedies. When the trees are to be released from the walls for a considerable time, the required number of stakes of a sufficient length should first be let into the alleys. They should be nearly as high as the wall, and stand some 2 feet or 3 feet away from it. When all is in readiness the branches should be loosened and tied to them, not in bundles, but in loosely extended order. When tied in bundles the object in view is partly defeated, as the buds on the wood situated inside are apt to start growing prematurely as a result of being so confined and protected.

APPLES AND PEARS.—When these are grown in the form of bushes or pyramids they may be pruned as soon as convenient after the wall trees are finished. The amount of pruning required depends in a great measure on the care and attention the trees receive during the summer and autumn. Where summer pruning is systematically carried out, the present pruning consists in merely shortening back the wood which was then stopped to three or four buds. This must be done, otherwise the spurs would grow to an inordinate length. There are, however, exceptions to this rule, and that is in the case of those varieties which are prone to produce fruit-buds at the extremities of their shoots. Notable examples are Potts' Seedling and Beauty of Bath among Apples, and Marie Louise and Souvenir du Congrès among Pears. There are also many others, but those quoted will suffice to put young beginners on their guard. These shoots vary in length from 6 inches to a foot, and should be left for one season. After they have fruited, these shoots may be spurred back the following autumn. Another matter which should be looked after is crowding of the branches. A judicious thinning is always beneficial when this has been allowed to take place. In very bad cases thinning is best spread over two or three seasons, as wholesale amputation of branches is a mistake. The wounds, too, should always be painted over afterwards, this preventing decay from setting in. A well-trained and properly developed tree should have its branches so disposed that sunlight and air can readily reach all parts, and each branch should be like a cordon trained tree, well clothed with spurs from base to tip. This is where a tree trained in bush form is infinitely superior in my opinion to one trained as a pyramid, as in the latter case the tree must have a leader, while in the former it can be dispensed with and the centre of the tree kept open. Young trees, therefore, must have attention in the way of training until their branches become set. Pyramids will require a stake to train the leader to, and this should be long enough to serve for two or three seasons. Bushes, on the other hand, do not always require a centre stake, and then only to draw a branch or branches which may perhaps be inclined to grow down too much into a more upright position. The outer branches in both cases may be trained by simply driving in half a dozen or as many more stakes as may be required all round the tree, securing the branches to them by lengths of twine. A good-sized loop should be formed where the twine encircles the branch, and put a shred or a piece of old indiarubber hose between it and the bark.

The branch can then be pulled down to the desired position, and fasten the lower end of the twine to the stake. Leave the leaders one-third, two-thirds, or nearly full length, according to the ripeness of the wood and the necessity of the case.

PLUMS AND CHERRIES.—The pruning of these should be done at the same time as the preceding. The former will require the same amount of attention if they have been summer-pruned; if not, spur back all shoots emanating from spurs to four buds. The trees have this season set a profusion of fruit-buds, and in the process of shortening back spur growths great numbers of them have had to be sacrificed, but enough and to spare remain. The branches of Plum trees may be left a trifle closer than for Pears for instance, but avoid anything approaching crowding. Leave a young shoot here and there in old-established trees to form future main branches, which will in time allow for the removal of the more decrepit ones. As regards the training and pruning of young trees, proceed as advised for Apples and Pears. Morello and Kentish Cherries may be thinned out if necessary, but no spurring-in must be done, as they both bear fruit on the wood made during the previous year. The less the knife is used the better, as all necessary thinning and stopping can easily be performed during the summer months. The same remark is also applicable to the dessert kinds, as this in a great measure averts disappointment from losses through gumming. A. W.

## TREES AND SHRUBS.

### TREES AND SHRUBS CERTIFICATED DURING 1897.

DURING the year 1897 a considerable number of trees and shrubs have been submitted to the floral committee of the Royal Horticultural Society, and of them nineteen have received either first-class certificates or awards of merit, being an increase of two over last year, more than double that of 1895, when only nine subjects were thus honoured, while in 1894 the number was no less than thirty. This list of nineteen does not include Roses, Tree Peonies, or Clematises, as they scarcely come under the heading of ordinary trees and shrubs. No less than three conifers with yellow-tinted foliage occur in the list, and to each of them a first-class certificate was awarded. Many of the plants are well-tried subjects, and can be obtained from most nurserymen. Hibiscus syriacus and its numerous varieties have been long known as a very desirable class of flowering shrubs, especially valuable from the fact that they bloom towards the end of July and in August when most outdoor shrubs are over. Not one, however, has been recognised by the Royal Horticultural Society till this year, when on July 27 two varieties, celestis and Painted Lady, were given awards of merit.

The following is the list of trees and shrubs that received awards during 1897:—

COTONEASTER HORIZONTALIS.—This is one of the most recently introduced of the Cotoneasters, having been first sent by the Abbé Armand David in 1885. It is remarkable for the peculiar arrangement of the branches, which are flat, frond-like, and disposed almost horizontally. The leaves are small and very dark green, while, in common with the minor twigs, they are arranged in a regular manner. It is especially effective during the autumn, as the berries, which are about the size of those of the other small Cotoneasters, are far brighter than any of them, being of a rich vermilion tint, which is very conspicuous against the deep green of the foliage. As autumn advances many of the leaves change to various shades of scarlet, and remain in this stage for

some time before they drop. It is more thoroughly deciduous than the other low-growing Cotoneasters, but if untouched by birds or mice the berries are retained for some time after the leaves drop. From the peculiarly stiff, flat style of growth it must be planted on a sloping bank or on large bold arrangements of rockwork, while, though seldom seen treated as a wall plant, it is very effective grown in this way, and berries as a rule more freely than in the open. This Cotoneaster was awarded a first-class certificate on March 9.

**CORYLOPSIS SPICATA.**—This pretty shrub, which was introduced from Japan in 1861, is a near ally of the Witch Hazels, and, like them, flowers during the early months of the year. It forms a freely-branched bush, clothed with pale green leaves, a good deal like those of some form of Hazel. The flowers, which are borne in drooping racemes, appear before the foliage. The individual blooms are small and of a pale yellow colour, but they are almost hidden by the large greenish yellow bracts. When the flowers are first expanded the bright red anthers are very conspicuous. *Corylopsis spicata* flowers freely when little more than a yard high, but Mr. H. J. Veitch during his travels in Japan mentions a bush of it in the neighbourhood of Tokio which was about 10 feet in height. An award of merit was given this *Corylopsis* on March 9.

**MORUS ALBA PENDULA.**—This is a weeping variety of the white Mulberry, and in order to show its pendulous characters to the best advantage it should be grafted on to upright stems of the ordinary form. It is fairly well known and can be obtained from most of our tree and shrub nurserymen. There are many other forms of the white Mulberry, it being more variable than the common kind. The weeping form here noted received an award of merit on April 27.

**RHODODENDRON PINK PEARL.**—This *Rhododendron*, upon which was bestowed an award of merit on May 11, is apparently one of the hybrids of *R. Fortunei*, of which we have now a considerable number in our gardens. It is a particularly fine form, the flowers, which are very large, being of a soft rosy pink, with darker spots at the base of the upper segment.

**SYRINGA SENATEUR VOLLAND.**—This is one of the many double-flowered Lilacs raised by M. Lemoine, of Nancy, several of which have been before this acknowledged by the Royal Horticultural Society. As these double forms do not differ greatly from each other, we have, I think, quite enough varieties in our gardens. The flowers of *Senateur Volland* are very double, purple in the bud state, and pale lilac when expanded. An award of merit was given it on May 11.

**RHODODENDRON MME. MOSER.**—This, which was sent by M. Moser, of Versailles, is one of the hardy *Rhododendrons* of the ponticum group. The flowers of this are of a rich deep crimson and semi-double, with crisped petals. Varieties of this section with double blossoms are but few, and *Mme. Moser* is a particularly good type, the colour being rich and the plant dwarf and free flowering—that is, judging by the specimen which was exhibited at the Temple show.

**AZALEA FREYA.**—Several varieties of hardy Azaleas with double blossoms have made their appearance of late years, and this is one of the same section. The trusses of this are large and bold, while the flowers are of a distinct and pretty shade of salmon-pink.

**AZALEA RIBERA.**—Another of the same class, but the flowers of this are bluish-white in the interior and tinged with pink outside. These two Azaleas and the *Rhododendron* immediately preceding received awards of merit at the Temple show on May 26.

**CEDRUS ATLANTICA AUREA.**—This golden-leaved form of the Atlas Cedar is of a good decided tint, and widely removed from either the typical kind or its glaucous-leaved variety. On June 15 a first-class certificate was awarded this Cedar, it being the first of three coloured-leaved conifers that received the same acknowledgment during the year.

**ESCALLONIA LANGLEYENSIS.**—A very pretty hybrid form of *Escallonia*, obtained from E. Philippiana, crossed with the pollen of *E. macrantha sanguinea*. The small dark green leaves and the free-branched habit of the plant partake more of the character of *E. Philippiana*. The open bell-shaped flowers, pink, with a deeper centre, are borne in small trusses on almost every little twig. An award of merit was given this on June 15.

**THUJA GIGANTEA AUREA.**—There are several forms of *Thuja gigantea* (Lobbi of gardens), and this newest one bids fair to become very popular with those that are fond of golden-leaved conifers. In this variety the young growth is of a rich golden hue, which changes in the second season to the normal tint. A well-coloured example was shown on June 29, when a first-class certificate was awarded it.

**PLATANUS OCCIDENTALIS ARGENTEO-VARIEGATA.**—Under this name was shown a Plane the young leaves of which were almost of a uniform creamy white, but as they became older were marked in a very irregular manner with white and different shades of green. As exhibited on July 13 the plant was very pretty and received a first-class certificate, but variegated-leaved trees in general are seldom satisfactory. This variety of the Plane appears to differ little, if at all, from one noted elsewhere under the name of *P. o. Suttneri*.

**VERONICA LA SEDUISANTE.**—Though hardy only in the more favoured districts of this country, the *Veronicas* are very ornamental, free-flowering shrubs, of which we have seen several new varieties within the last few years. *La Seduisante* is certainly one of the best of its class, the long spikes of blossoms being borne in great profusion. The colour of the flower is a beautiful rich purple, while the leaves are shaded with bronze.

**HIBISCUS SYRIACUS CELESTIS.**—This hardy *Hibiscus*, which has now been grown for some years, is, I believe, of French origin. It is certainly very distinct and pretty, the large single blossoms being of a kind of dark lavender-blue with a purplish-crimson centre.

**HIBISCUS SYRIACUS PAINTED LADY.**—The flowers of this are bluish-white with a maroon blotch at the base of each petal, forming a most decided contrast. An additional value is attached to these varieties of *Hibiscus*, as they flower towards the end of July and in August, when outdoor shrubs in bloom are not numerous.

**RETINOSPORA OBTUSA SULPHUREA.**—The whole of the shoots of this variety are tipped with soft sulphur-yellow, while the mature foliage is pale green. It is a pretty and distinct variety of this variable Japanese conifer, and received a first-class certificate on September 21.

**VERONICA SILVER STAR.**—This, the second *Veronica* to win distinction this season, is a pretty little variegated shrub. In the young leaves the variegation is of a creamy tint, but it ultimately becomes silvery white. The plant is of a dwarf, compact habit and will doubtless be useful for decoration. It received an award of merit on October 12.

**NANDINA DOMESTICA.**—In Japan this is largely grown for its ornamental qualities, but it is generally believed to have been introduced from China. It is nearly related to the *Barberries*, and forms a somewhat upright, sparsely branched bush. Towards autumn the leaves become flushed with red, and it was in this stage that an award of merit was given to it on October 12. The small whitish flowers, which are borne in somewhat elongated panicles, are in themselves not at all showy, but they are succeeded by berries about the size of Peas, which are of a bright shining red when ripe. In this stage the plant is particularly ornamental, but as a rule it does not berry freely here. It does, however, in Japan, where the cut sprays are largely used for indoor decoration. This *Nandina* is hardy only in especially favoured districts, and is consequently but seldom met with. T.

**Cotoneaster rotundifolia.**—This shrub as seen at Kew merits a passing note owing to its

particularly bright red berries, which in tint surpass those of any of its immediate relatives. Whether less appreciated by the birds than others I do not know, but the berries of *C. rotundifolia* are untouched, while those of all the others are nearly cleared off. A fine bold clump of this *Cotoneaster* is just now a very striking feature.—T.

**Erica mediterranea hybrida.**—In the collection of *Ericas* at Kew this *Heath* stands out as particularly valuable from the fact that it is now in full flower, and, judging by its previous behaviour, it will continue for some weeks yet. It forms a dense rounded tuft about a foot high, while the flowers, which are borne in erect spikes, are pink, with the dark-coloured anthers just protruding through the mouth of the corolla. Whatever be the origin of this *Heath*, it is certainly widely removed from the typical *E. mediterranea*. It deserves a place in any collection owing to its winter-flowering qualities.—T.

**Wellingtonias seeding.**—An experience gained from the solitary specimen trees of this has not furnished opportunities for observing whether the *Wellingtonia* seeds freely or rarely in this country. In pleasure grounds where avenues of them are planted it may be no uncommon occurrence to find seed-cones develop, and to me, and probably to many other readers of THE GARDEN, it would be interesting to learn what are the conditions in which *Wellingtonias* are known to produce seed-cones. In the grounds here are several trees in varying ages, only one of which has any tendency to seed, and this has not been observed until the present year. The tree under notice is not so large as the others, though it certainly is the best shaped and healthy. The largest has a girth of 17 feet at 3 feet from the ground-line, while the other one has probably not more than half the diameter of stem. In this case even there is no freedom in seed-production, perhaps not more than half a dozen, and I shall be curious to know if the seed will ripen. The fact of their being small and not very conspicuous may account for some lack of knowledge in the matter. At the present time many observers might, without critically examining the higher branches, fail to detect the green cones.—W. S., *Rood Ashton, Wilts.*

## ORCHIDS.

### NOTES ON ORCHIDS.

For a winter display few plants equal the beautiful *Dendrobium Phalaenopsis*. Thanks to the efforts of collectors, we have now plenty of it in cultivation, and in many collections of moderate size only this fine species is represented by hundreds of plants. Nothing can be more showy, yet refined, than its magnificent racemes, the colours more varied than those of any other *Dendrobie*. *Calanthes*, too, are now very fine, many of the choice hybrids as well as the usual *C. vestita* and *C. Veitchi* in their varied forms delighting the eye by their bright tints and delicate texture. The earlier plants of *Dendrobium nobile*, *D. anreum*, and *D. Wardianum* are also beginning to be interesting, though the principal display of these is not yet. *Zygopetalum Mackayi* is a useful old plant, and there are even now many *Oncidiums* and *Miltonias* left of the autumn-flowering kinds. *Lælia autumnalis*, *L. anceps*, and *L. acuminata* in variety have done well this sunny autumn and are showy and bright. *Cypripediums*, of course, are legion, and the cool house is beginning to look very gay with *Odotoglossum crispum* and a few similar kinds. The brilliant *Sophranitis grandiflora*, the showy section of *Masdevallias*, and a few chance sprays of *Mesospindium* and *Cochlidia* form an effective contrast with the snowy white *Masdevallia tovarensis*, a pretty and especially useful garden Orchid. *Vandas* of the tricolor and nearly related species have a few spikes still left, and the spikes on the charming *Saccolabium giganteum* are beginning to lengthen out.

Not much can be done just now in the way of repotting, but a good deal may be done towards the health of the plants by constant and timely attention to cleanliness as the term is applied in its varied senses. The roof-glass, for one thing, should be kept clean both inside and out, and all spare time is well spent in sponging the foliage of any plants where there is a suspicion of insects. A considerable drop in the outside temperature may be expected now at any time, and everything should be in readiness to prepare for it. Because we have wanted little fire-heat as yet is no reason why flues should be left choked with soot. Any night, dull and heavy as it may appear at sundown, may change to severe frost before morning, and this shows the necessity of growers being always on the alert. One can hardly go wrong at this time of year in keeping a little warmth on the pipes even in the cool house and allowing a plentiful supply of fresh air. We are ready then for whatever comes, and the air currents are doing good, no matter what the weather may be. In the metropolitan fog area perhaps it is best not to allow much air while the fogs are on, but this bane of the Orchid grower will insinuate itself no matter what is done to prevent it. Growers in a pure air have a great advantage over those near London, for fog in a pure country atmosphere, though it may be unpleasant, does no harm, not being laden with the sulphurous fumes from thousands of chimneys. Damping at this season must be gone about with caution, and though far from recommending a harsh or dry atmosphere, I should certainly feel safer with any house of epiphytal Orchids a little on the dry side than the other way. Moisture in summer when the sun is bright and quickening in its effects is a very different thing to moisture now, when every day we have more than we want of it outside. Especial care is necessary with such sensitive plants as the Moth Orchids. Any change, however slight, is felt more by these than by the usual run of pseudo-bulbous kinds, and though such vigorous-growing species as *Phalenopsis amabilis*, *P. Schilleriana* and such like may get along under rather unsuitable conditions, there are many of the smaller-growing section and even of the Luddemaniana types that will not stand it. It is easy enough to say keep up a nicely-balanced temperature. Some one who has tried may say, "How is it to be done?" But it is quite impossible to give a detailed description of what is necessary, circumstances varying so much that no two cases are exactly alike. One point is actually necessary in all, and that is to keep up the night temperature of the house. None of the *Phalenopsids*, even when at rest, need a lower temperature than 60°, and this figure must not be much exceeded from now onwards until February or March. Quite different are the *Dendrobes* from the same neighbourhood. One and all of the deciduous kinds are better now for a low cool night temperature, and any house where they get plenty of light and air and a night temperature of 45° to 50° will suit them admirably. Watering at the root now requires care; few plants are taking much, and many may be kept quite dry, the atmospheric moisture being ample to keep them in good condition. Nearly all *Cattleyas* and many *Laelias* are taking much less. The *L. pumila* section being in flower needs a little moisture at the root, and so do most of the large-growing kinds, but even here for a month or two the drier side is the safer. Little alteration is needed in the temperatures given last month, but in every case it is better to allow a slight drop on very cold nights than to unduly press the fire-heat.

**Cypripedium insigne Sanderæ at Cheltenham.**—This rare and beautiful Orchid is at present in flower in Mr. Cypher's nursery. I was much struck with its distinctness. It seems to possess all the good characters of the old *insigne*. The flowers are of the same size and form, and the leaves also are similar, but the colour of the flower is a clear, rich pale yellow that makes it attractive and conspicuous in a house where other

*Cypripediums* in great variety are grown. I am sure when one meets with such a desirable flower as this new *Cypripedium* is proving itself to be, it is to be regretted that choice Orchids cannot be multiplied as quickly and grown as freely as our soft-wooded plants.—M.

**Cymbidium Traceyanum.**—A distinct form of this lovely *Cymbidium* has recently flowered in the collection of Mr. T. McMeekin at Falkland Park, South Norwood. The plant carried a raceme of twelve flowers. The sepals and petals were lacking in substance when compared with many other forms of this species, and the colour was also much lighter. They were of a pale greenish yellow, heavily spotted and lined with reddish brown. The front lobe of the lip is creamy

it requires a liberal amount of moisture at the roots during the growing season. It is liable to attacks of red spider if grown where the position is at all dry.—H. J. C.

**Cattleya dolosa.**—This pretty plant should be more grown, for though the flowers lack the size of and make less show than those of the labiate section of varieties, the delicately tinted little blossoms never fail to excite admiration. It has been described as a variety of *C. Walkeriana*, but it is quite distinct as a garden plant, no matter how nearly related botanically. For one thing, it always flowers upon the top of the growth between the leaves and not from a secondary growth, as in the species named. The flowers, each about 4 inches across, are a pretty



*Clematis Mont Blanc.* From a photograph sent by Mr. C. Metcalf, Halifax. (See p. 499.)

white, spotted with light brown; the ground colour of the side lobes also white, lined with the brown of the front lobe. *C. Traceyanum* first flowered in Mr. H. A. Tracey's nursery at Twickenham, and was exhibited at the Royal Horticultural Society's meeting in December, 1890, when it received a F.C.C. Several other plants have since flowered, though none are equal to the original in point of size and substance of the blooms. Its habitat is practically unknown. It is a plant of vigorous constitution, and should be grown in an intermediate temperature. The compost should consist of good fibrous peat and loam, with a liberal sprinkling of rough sand or finely broken crocks to keep the material free, as

soft rose varying a little in intensity, the lip having a yellow disc and a bright marginal blotch of deep purple. The plant is not a strong grower, and succeeds best either in small baskets or pans, or wired to pieces of Tree Fern stem. The natural roughness of the latter material suits it well, but if grown in pans use a thin compost only, consisting of peat and Moss in equal proportions over good drainage. Disturbance is dangerous with these small growers and should not be more frequent than can be helped. This *Cattleya* flowers upon the newly-formed bulbs without resting, and should therefore be kept moist until the blooms are past, removing these as soon as open from small or weak plants. It is a native

of Minas Geraes, and was introduced in 1872. Importations since have not been very frequent, but it is a plant well worth seeking for.

**Cattleya Walkeriana.**—This I have noticed in flower this week. The blossoms are each about 4 inches across, the sepals and petals recurving and soft rose in colour; the lip has a yellow centre and a bright purple blotch in front. The flowers are produced on few-flowered spikes, not from the top of the pseudo-bulb, as is usual in the genus, but from a kind of spurious growth that springs from the base of this. The plant does best in shallow pans or baskets suspended near the roof in the Cattleya house, and the habit of the species must be kept in mind when preparing these and the compost. A large body of material is about the worst thing possible for it. *C. Walkeriana* is not exactly a robust plant, and care should be taken that it does not over-flower itself. Because the growth that produces the flower-spike dwindles away when the blossoms are past is no reason why the strain of flowering is not felt just as severely as with other kinds. When the plants are strong and healthy, flowering does not, of course, harm them in the least. *C. Walkeriana* is a native of Brazil, where it was discovered about 1840 by Gardner.—R.

**Odontoglossum constrictum.**—This is a modest-looking little Odontoglot, very variable in colour and markings, and very free-flowering. The blossoms are pleasantly fragrant and last well in good condition if not sprinkled with water or bruised. The scapes bear a large number of flowers each about 2 inches across, all the segments being narrow, pale yellow with reddish-brown spots, except the lip, which is usually white with fewer and larger spots of rosy-red. It should be grown in small pans suspended from the roof or in pots, but the semi-drooping spikes look well in the former position. Not only this, but the free circulation of air in such positions tends to health and vigour in the plants. Not more than an inch of compost is necessary, but this should be of the best quality obtainable, brown fibrous peat and freshly-gathered Sphagnum Moss being mixed with crocks and charcoal. Pot the plants firmly in autumn, and keep on the dry side until roots are forming. After this all through the year they must be kept moist, the house wherein they are grown being heavily shaded and freely ventilated. It is a native of La Guayra and Caracas, whence it was introduced in 1843, and first flowered in Mr. Rucker's collection. A very similar plant is *O. Sanderianum* from the same locality.

**Lælia Perrini.**—The flowers of this fine old Lælia are very bright and useful, though not so large as some others in the genus. It produces its flowers from the apex of the young growth after the manner of the autumn-blooming Cattleyas, and each spike bears three or four flowers about 5 inches across. In the typical form the sepals and petals are a bright rosy lilac, the lip similar in ground colour, with purple and yellow markings. It is not a species that delights in much compost; nice specimens may be grown in pots about 6 inches across filled to within 1½ inches of the top with clean crocks. For compost use good peat and Moss, with plenty of crocks and charcoal. The plants, when newly imported, are often very dirty and covered with insects, and this of course must be rectified before placing them among clean, healthy plants. Choose a light position at the cool end of the Cattleya house and encourage the plants to grow freely during the spring and summer, but after flowering keep them dormant until the next spring. The atmosphere may be kept moist the whole year round, but it is not exactly a thirsty subject at the roots. *L. Perrini* is a native of Rio de Janeiro, occurring rather high up on the mountains. The date of its introduction was about 183

**Sophronitis grandiflora.**—Once again the beautiful showy blossoms of this Orchid are open, and by their bright effective tints lighten up the

flowering house considerably. It is really surprising the amount of blossom that small plants of this species go on producing year after year without any apparent harm, and not only this, but carrying them on the plant for weeks on end. A pretty flower is *S. grandiflora* in spite of its somewhat flat shape. The plants are not difficult of cultivation when once a suitable place is found for them, and this will not be in quite the coolest house, but in such a position as the warm section of *Odontoglossums* thrives in. I like them best suspended from the roof, both on account of their liking for plenty of air and also because of the light reaching every part of the plant at all seasons of the year. Under these conditions the plants get solid and of that bronzed appearance that is always the result of health and fore-runner of a bounteous bloom. They are not very strong-rooting plants, so only a thin compost is needed. *Sophronitis grandiflora* is a native of the Organ Mountains, in Brazil, and it must be very plentiful there, scores of large importations having been made since Gardner first sent it to Messrs. Loddiges, of Hackney, about 1840.—H.

#### CYMBIDIUM GIGANTEUM.

THE flowers of this species are now open, and it makes a nice show, especially on large, healthy plants. The leaves are long, sword-shaped, deep green with paler veins, and the pseudo-bulbs are large, oval, with the leaf sheaths clasping them at the base. *C. giganteum* is a very easily grown species, and, like all the large members of the genus, likes a substantial compost. I am aware some growers use manures of various kinds rather freely, but I grow it in equal parts of peat fibre, chopped Sphagnum Moss, and loam, with a liberal addition of large broken crocks or potter's ballast, and have no reason to be dissatisfied with the result. The time when feeding with manures seems to be necessary is when the plants are too large to be shifted into larger pots, yet are pot-bound. It becomes a question then of feeding or else of breaking up the specimens, and when well suited it is remarkable how quickly these plants outgrow their receptacles. A piece I imported about five years ago was then placed in a pot about 10 in. across. It is now in one 18 inches, and has grown out over the sides in all directions, so that next time a shift is given it will need a much larger one. It is not often possible to remove much of the old material, as this is usually so firmly entwined with roots that the latter cannot be interfered with. In such cases a good shift must be given and the material made firm with a potting-stick. The plant noted above is growing in a cool shady fernery, a class of structure that suits *Cymbidiums* much better than a very warm Orchid house. In the latter the plants are sure to be overrun with insects, and the bud-dropping, so troublesome in this and nearly related kinds, is almost unknown in a cool house. For years I was troubled with this in *C. Lowianum*, but since I have adopted a cooler régime I have had no trouble. The worst insect enemy to *Cymbidium giganteum* is a small white scale that clings very closely to the leaves. This should be kept in check by frequent syringing, and wherever the plants are thoroughly clean, use every endeavour to keep them so, for it is a troublesome job to get rid of it once they are badly overrun. Frequent light dampings or spraying overhead are beneficial to the plants, especially when the weather is hot and dry, and at this time a shady position should always be afforded. *C. giganteum* was discovered in Northern India by Dr. Wallich, who introduced it in 1837. R.

**Epidendrum Brassavolæ.**—This is a very distinct and pretty species, the flowers, as denoted by the specific name, resembling somewhat those of a *Brassavola*. It has greenish or straw-coloured sepals and petals, the lip trowel-shaped, pale purple in front, with a yellow-striped throat. The pseudo-bulbs each bear a pair of dark green leaves, from between which the flower-spikes

issue, each spike carrying about half a dozen. It does well in the Cattleya house in medium-sized pots, and likes plenty of moisture while making its growth. It is a native of Chiriqui and was sent home by Mr. G. Ure Skinner. It first flowered in this country in 1867.

**Barkeria Barkeriola.**—Although a small-growing plant, this bears fine racemes when in good condition. These are drooping and contain about five or six flowers, each upwards of 1½ inches across. The sepals, petals, and lip are white, with a suffusion of lilac or soft purple, and the latter has a much deeper purple blotch in front. This *Barkeria* does well suspended from the roof in a cool, moist, yet fairly light house, where it has plenty of air about it all the year round, with only a little compost about the roots. It is a native of Mexico, and was introduced by Messrs. Sander in 1884.

**Odontoglossum pulchellum.**—This pretty plant I noted in flower a day or two since for the first time this season. The spikes grow a foot or more high, and the upper portion is clothed with the chaste little white blossoms, each with a bright golden-yellow centre. A more easily grown *Odontoglot* does not in all probability exist, as it will thrive in many places where none of the crispum or similar type will do. A cool, moist atmosphere all the year round, plenty of water at the root while growing, and a shady position suit it best. The roots are somewhat larger than in some others, consequently the compost must be very rough and open.

**Pilularia fragrans.**—This resembles no other flower so much as the white *Dipladenia boliviensis*, the flat lip with its dense yellow eye being very beautiful. The growth is peculiar, the bulbs having a flattened appearance, and both these and the foliage have a similar shade of dark green. *P. fragrans* when strong and healthy roots with comparative freedom in a rough mixture of peat and Moss, but I know of few Orchids more difficult to induce to root freely again when once they have got into a bad condition. This shows the necessity for good drainage, an open compost, careful watering and timely attention to top-dressing before the old material gets sour.—R.

**Cypripedium Sedeni.**—This is one of the oldest hybrids, but difficult to beat as a garden Orchid, its delicate, yet showy blossoms being produced nearly the whole year round. In the typical plant these are rosy white on the dorsal sepal, the lip deeper in colour, but there are many named varieties. It is a very easily grown kind and will thrive and flower with the greatest freedom in an intermediate Orchid house or fernery, liking a fairly light position without being exposed to the sun. It grows freely in a compost of equal parts of peat fibre, loam and Sphagnum Moss, and may be repotted early in the new year if this is needed.

**Lælia autumnalis atro-rubens.**—This is a richly-tinted and beautiful variety, the flowers of a bright purplish crimson, larger and broader in the segments than the type. It was introduced by Messrs. Backhouse in 1879, and, like the typical plant, delights in a cool, yet moist and well-ventilated house all the year round. It may be in an almost unshaded position, this tending to a firm growth that is bound to be satisfactory at flowering time, and during active growth the plants require a very abundant supply of moisture. While at rest they may be kept perfectly dry for a few weeks with advantage. It is best grown on trellised blocks or in baskets, with a thin compost of peat and Moss over good drainage.

**Epidendrum Cooperianum.**—Although for some reason this section of *Epidendrum* finds little favour with Orchid growers, few plants are prettier when the room they take up and their easy culture are considered. *E. Cooperianum* is not particularly showy, but the contrast of the rosy lip against the olive-tinted sepals is very good, while the habit of the plant and the disposition of the racemes are elegant. It usually grows about a couple of feet in height, the stems being covered

towards the upper part with deep green leaves. To grow it well, a fairly large pot and a rough, open mixture of peat fibre, Sphagnum Moss, and charcoal are necessary. The plants should not be disturbed oftener than really necessary, but it is better to repot than allow a sour and water-logged condition of the compost. Remove everything of this character when taking the plants out of their old pots and drain the new ones thoroughly. Pot firmly, with a very slight rise to the centre only for strong plants, weaker ones being elevated a little more. Grow them as rapidly as possible consistent with a firm growth, and allow plenty of sunlight towards the latter end of the season. Avoid watering them heavily overhead, but light sprinklings are very beneficial in hot weather. It does best under Cattleya house treatment, being a native of Brazil, whence it was introduced in 1865.

## STOVE AND GREENHOUSE.

### PLANTS THAT FORCE WELL.

WHEN the Chrysanthemums and Geraniums are past there is always a demand for spring flowers of various kinds, and in order that there may be no blanks it will be necessary to introduce the plants into heat now. The requirements of places so differ that it would be impossible to lay down any rules as to what are the best things to force, but, as a rule, flowers with strong scent are not so much in request; those, however, having a light, graceful habit, bright in appearance, and producing an abundance of bloom are the most useful. Many of our hardy shrubs will force well, and the same can also be said of some of the early flowering herbaceous plants, and those who have to supply a quantity of cut flowers would do well to grow a batch of such things as the following. The Dornicums in ordinary seasons will bloom freely enough in the open ground in March, but if grown in clumps specially for forcing they may be potted up in October and stood in a cold frame until required. If introduced into a gentle heat in December they may be had in bloom from January onward till those in the open ground flower. The old *D. caucasicum* is the most common and flowers the earliest, but *Clusii* and *plantagineum excelsum* are the two best, the flowers being larger and the stems longer. *Aquilegias* when well grown in pots look very handsome. *A. cœrulea* and *glandulosa* are particularly fine, and may easily be had in flower in February. These plants will not stand much forcing; therefore to have them in bloom early they must be brought on gradually. Plants strong enough for this purpose may be grown from seed sown as soon as it is ripe either in the open ground or in boxes. When large enough to handle, the seedlings should be pricked out into a cold frame where they can be protected through the winter, when if planted out on a light, rich piece of ground they may be lifted and potted the following October. *Dielytra spectabilis* is so well known that it needs no description. Many, however, fail to grow it to perfection on account of applying too much fire-heat. As a pot plant it is charming, and for cutting there are few things more beautiful, as the leaves as well as the flowers have such a graceful appearance. The plants intended for forcing should be potted up as soon as the foliage has died down and protected under beds of ashes till required.

Turning to the shrubs that are useful for this purpose, we find even a greater number to choose from. In the first place, we have *Spirea confusa*, with its pretty little clusters of Hawthorn-like flowers. This species only re-

quires a very gentle heat to induce the flowers to expand, for being naturally very early in bloom too much warmth would cause the buds to go blind. Where there is much room decoration in early spring this is one of the most lovely plants possible for that purpose. The flowers are borne in small clusters along the preceding year's growths, which are very slender, and therefore hang gracefully in great profusion. Another companion is the double-flowering Cherry.

*Staphylea colehica* is also a good shrub to force, its graceful spikes being produced in great profusion with the most gentle forcing. There are several varieties of *Dentzia*, all of which force easily and bloom most profusely. They are easily grown from cuttings and layers, so that no place need be without them. Amyg-

tionation than *Hydrangea Thomas Hogg*. Cuttings of this inserted in a cold frame in July will, if potted up as soon as they have rooted, flower well early in the season. I have often had plants treated thus in full bloom early in March. They can be introduced into heat as required, when they will make nice, useful stuff; the flowers, being white, are always in request. There are many other shrubs that are useful for forcing, such as the Ghent *Azaleas*, *Azalea mollis*, some of the alpine *Rhododendrons*, *Kalmias*, *Andromedas*, &c.

H. C. P.

*Hymenocallis caribæa*.—This handsome species has been flowering well of late in the great Palm house in the Royal Gardens, Kew, a large example having produced several scapes,



The erect *Clematis* (*C. recta*). From a photograph sent by Miss Willmott, Warley Place. (See p. 499.)

dalus and *Prunus* are also two shrubs that expand their flowers with but little forcing. They are useful for decoration, but are of no value for cutting. There are also several varieties of *Syringa*, notably *Charles the Tenth*. This fine variety when well grown produces fine clusters of bloom, which last for some time in perfection if kept in the conservatory. The same may be said of the *Guelder Rose* and *Philadelphus coronarius*, both of which make nice pot plants when in a small state. The flowers of the latter are, however, too strong scented to suit most people, particularly when used for room decoration. But of all the flowering shrubs none are more worthy of cul-

with the usual array of pretty flowers. The chief beauty of several species of this genus, apart from their characteristic grace and elegance, is the prettily formed membranous cup within the segments. In some instances this is exceedingly chaste and beautiful, glistening in the satiny, almost transparent whiteness. Some species also are delightfully fragrant, thus adding another charm to these valuable stove bulbous plants.

*Justicia carnea*.—I remember some thirty years ago this plant was much grown. The old plants were cut back about July, and placed in a warm pit to break. Then they were shaken out, potted, and returned to the pit. As the days shortened they were placed in a vinery just started, and here they gave an enormous amount

of bloom in the months of February and March. Another simple way to grow this plant is to strike the cuttings in March or April. When strong enough take out the tops. When the pots are full of roots in July, put the plants into 5-inch or 6-inch pots, growing them on in a warm frame. When the weather is too cold for them to remain here, place them in a warm house with a temperature of about 50° to 55° at night, and here they will bloom during the dull autumn months. I have them now (December 3) in bloom grown in this way.—DORSET.

**Tacsonia exoniensis.**—There are few more suitable plants for climbing over the roofs of large houses and filling the space quickly than this Tacsonia. In a long glazed corridor here, where it is too draughty for Lapagerias, I planted a small piece three years ago, and it has made wonderful progress. Since June it has not been without flowers, and there are scores of buds to open now; they are, in fact, produced at every joint. Like the Passion Flower, it thrives in almost any description of soil, and to obtain the best results it should be allowed to ramble unchecked as far as possible. A few of the more rampant shoots must, of course, be cut out where they have filled their stations, but if there is room for these to hang down a yard or more from the glass the effect is much finer than if kept tied in closely. Propagation is easily effected by cuttings, seeds, or layers. Cuttings of young wood root freely in sandy soil under a bell-glass or in a propagating pit. Pot on until the plants have made a yard or two in length, and then plant in their permanent positions, giving rather a large but well-drained border if possible.—R.

## KITCHEN GARDEN.

### FORCING FRENCH BEANS.

THE forcing of French Beans from November to January is not profitable; indeed, I have never been able to get sufficient pods to pay for room occupied, as though I have got a fair set, the pods refused to swell, turned yellow, and finally dropped. Of course, in brighter localities there may be greater success. These remarks would more concern what may be termed autumn supplies, as plants from seed sown now will come in for early spring use, and with lengthening days and more light there is less difficulty in securing a crop. I endeavour to get Beans as early as possible in the new year, and for this reason sow early in December. This cannot be advised if cost is considered, as the crop is none too plentiful; still, French Beans in February are a welcome addition. The plants at this dull period of the year are none too strong, and the only gain is earliness. For reliable supplies January sowings are quite early enough, and I will briefly describe the forcing from January to June and note the value of those kinds which do best. For what may be termed early supplies I would advise small pots. I find it advisable to grow the earlier lots in small pots, as there are few roots, these decaying if overwatered or given insufficient heat. Six-inch pots are useful, and I do not exceed 7-inch for the earlier lots. Many sow too many seeds in a pot. It may be necessary to sow liberally, but in no case should thinning be overlooked, as too many plants cause weakness, and they have a tendency to decay at the base just above the surface. Three to five plants in the size of pot named are ample. I prefer the smaller number, as these will then be stronger and yield more pods than crowded plants. Many persons adopt the old method of half filling the pots when sowing, filling up the remaining portion when growth is fairly active or before the plants come into

flower. I do not advise it, as I have noticed the added soil is not filled with roots. The new soil causes the stems to decay. I advise filling up the pots to within 2 inches of the top at time of sowing, relying on liquid manure later in preference to giving top-dressings of soil or decayed manure. I have seen many failures with giving hard forced Beans excess of manure in their early stages. The plants occupy the soil so short a time, say six to nine weeks, that there is not time to absorb the rich food given. After sowing, much depends on how the plants are treated. I have had failures with January sowings; they may have had too much moisture at the start, which is fatal, or have been too long in germinating. Another evil is too old or imperfectly ripened seed. For the earliest supplies, new seed and that ripened early in the summer is the best. I always sow at the end of April to get the best seed for hard forcing. Rapid germination is a great gain, and in potting, if the soil is light, ram firmly, this causing the plants to get a strong root-hold, and they do not dry so quickly or suffer from red spider. I place the plants over the hot-water pipes till the beans push through the soil and then stand on shelves or stages close to the glass and water very carefully; indeed, no water is needed from time of sowing till the plants are a few inches high if the soil is fairly moist. The temperature may range from 60° to 70° by day, 10° lower at night, and the house or pits will need to be fairly dry. In fine weather damping over early in the day with the syringe will do good, but the plants should be dry by sunset and not damped over when in flower. For first supplies very little food will be needed. Weak liquid I find best after the flowers have set. From early January-sown plants there will be gatherings till the end of February and early March. An early variety is best—Syon House, still an excellent early Bean, Ne Plus Ultra or the larger Early Favourite.

We now come to the most important crop—that sown in February and March. Larger pots may be used or they may be planted out. For February sowing I still advise the early quick growers. For years I found Mohawk a reliable variety. At this date 8-inch pots are a useful size. The seeds will germinate more quickly, the plants are stronger and need more moisture. It is well to use bottom-heat to get a rapid growth. For beds I usually sow in 3-inch pots and make the bed at time of sowing. By the time the plants are ready the soil is warmed through and in condition for planting. A bottom-heat of 80° and a liberal top heat are needed. To save time in March or April many sow thinly in boxes and lift the plants direct into the beds when a few inches high, and with care it is a good plan. Another plan is to sow in their growing quarters when the soil is warm, and when a few inches above the soil to thin to the distance required. Beds have much in their favour if near the glass, as more than one crop can be taken from the same plants, as if they are clean after the first crop is cleared, the surface dressed with rich food such as bone-meal or spent mushroom manure and the plants stopped, they make new growth and produce a second crop much sooner than new plants from seed. For April sowings, or indeed when March is well advanced, there is no need to study variety, as now any kind will grow freely, and, if wished, larger pots may be used and a greater depth of soil given plants in beds. Sow every fortnight in pots from March to the end of April, but at longer intervals for beds.

The best variety if size and quality are needed is the Canadian Wonder. There is more than

one variety of this excellent Bean. The true one gives a very large pod and is exceedingly prolific. I have seen this variety give three crops. Canadian Wonder treated too well runs to leaf growth. This is why I have not advocated planting out in cold frames for latest supplies. If planted out the soil should not be too rich or too deep and the plants not too thick. Mohawk is always reliable, also Negro Longpod and Long Sword. For large houses where there is head room, anyone may with advantage sow the newer variety or climbing French Bean. This, with a few sticks, gives a wonderful crop of splendid pods. I do not advise it for forcing, but for latest supplies grown in pots it does well. It is more at home planted out and stopped at 3 feet from the soil. This variety, if sown the last week in March or early in April, will give a good supply just before the earliest plants in the open borders turn in. G. WYTHES.

**Autumn Giant Cauliflower.**—I doubt if ever there was a more favourable season for this splendid vegetable, for up to the present heads are being cut in the open fields by waggon-loads, every one fit for exhibition, and so solid that each one weighs several pounds; in fact, the general complaint has been that they are far too large. A few days since I saw a quantity of heads cut quite large enough for any purpose. The plants had never been transplanted from the seed-bed, but merely thinned out to a foot apart by pulling away the smallest ones.—J. G., *Gosport*.

**Lettuce-leaved Endive.**—This new Endive I have grown this year, and find it valuable for winter salads. It is doubtless a type of the Large-leaved Batavian, one of the best winter Endives grown, as it is hardy and of excellent quality. The variety in question has large leaves, with solid hearts, and it blanches freely with little heat if in a dark place. Unlike the curled varieties, it does not decay, but is crisp and sweet. Some persons like the Endives for boiling in the same way as Spinach. Of course, for that purpose blanching is not necessary. The above, owing to its size and fine shape, is a splendid variety for autumn supplies. I find it does not run to seed for a long time and is very hardy. For winter use the above variety will be found valuable, as it will give a supply when Lettuce is scarce.—W. B.

**Salsafy Giant.**—This is a new introduction, and certainly an excellent one. It is quite distinct from the old type, as it is larger and of better flavour. I am not an admirer of vegetables on account of mere size, but in the old variety the roots are small and in many gardens much forked and difficult to clean or prepare for table. I find the new Giant excellent as regards size, and the roots being thicker, longer, and less forked are a welcome addition to our winter vegetables. For years I have treated this plant different to other roots. It is not well to lift early; indeed, in well-drained land it winters in its growing quarters with a few ashes or litter over the crowns in severe weather. In wet land the roots decay. In such cases late lifting and a cool store are advisable, with plenty of soil or sand between each layer of roots to keep them from shrivelling. When sowing, too rich land must be avoided, as manures cause the roots to fork badly.—G. WYTHES.

**Tomato Conqueror in winter.**—Those who saw the large collection of this variety at a recent meeting of the Royal Horticultural Society could not fail to notice its excellence, and though I have seen better coloured fruits, no fault could be found with the size or quality. I am aware this variety does not find favour with private growers in many places on account of the fruits being uneven and rather flat, but in a measure this may be avoided. I know it is difficult to get the fruits free of the objections noted. Some of the fruits will be-

come corrugated, but this matters little at this season, as they are mostly used for cooking. My object in sending this note is to point out the value of Conqueror as a winter Tomato. Of course there is no lack of home-grown Tomatoes in December, but this variety ripening now will keep longer than many others, and this is a great gain. The fruits of Conqueror do not split or decay at the stem so readily as some of the better shaped kinds. As regards its cropping I know of none better. In the north this is a great favourite for open-air culture. For mid-winter crops plants raised in June will set fruits later than most kinds, and what is so valuable to the large grower is that it sets well into the autumn with scarcely any fertilising. For forcing, Conqueror will hold its own. Doubtless much of its value as a winter Tomato is on account of its free setting. The fruits are drier than those of the Perfection type, but little inferior in quality if season is taken into consideration. For many years I grew Conqueror on account of its earliness and free setting, but there are newer early kinds which now find more favour and are of better shape. Conference is nearly as early and is excellent, and Frogmore Selected is a grand forcer, with fine flavour, and, like Conference, very prolific.—S. H.

**Keeping Onions.**—My Onions are keeping very badly this year, though apparently well ripened when harvested, and although they were perfectly dry, some are already beginning to grow out. White Spanish is largely relied on here, and it is keeping better than any other kind, the bulbs being of medium size with small necks. They are stored in a small lean-to shed with no protection but that of the tiled roof, and last year they were many times frozen quite hard. This does no harm, in fact I believe had the weather been colder the bulbs would have been in better condition now. James' Keeping is a capital Onion when obtained true, but this season I have been growing a large soft variety not unlike Giant Rocca in place of it, thanks to badly selected seed. Autumn-sown plants are looking much better than last year, and with reasonable exemption from bolting these should be an early and useful crop. But these cannot be relied on much before May, and as Onions are a daily necessity in the kitchen it is important that everything possible is done to ensure their keeping well. A free circulation of air and thin storage are important, and the cooler and drier the store the longer the bulbs keep in good order. But even more important it is to get the bulbs thoroughly ripened before storing and quite dry, otherwise, with every care, they will not be satisfactory.—R.

**Good Celery.**—There is no lack of varieties of Celery, and at this season one can soon distinguish any special merit in this vegetable. It is surprising how Celeries differ in the same soils and under the same treatment. Sufficient moisture is an important detail, and one that is often overlooked at the most important period of growth—July to September, as plants at all starved never have the sweet, nutty flavour of those not checked in any way. I am aware there can be excess of food in the way of rank liquid manure, as I have seen many plants ruined by sewage being employed at a season the roots were dry and very few perfect plants were found. Many think that Celery cannot have too much food, but it is wrong, as in many cases such Celery is thick at the base, makes a woody, thickened growth, and soon bolts. I like the medium-sized varieties, not because they are of superior flavour, as a well-grown large kind is quite as good. For table the medium-sized roots are better, as they are more readily cleaned and need less cutting. On the other hand, the large roots keep well if grown specially for late supplies. I find the red Celeries the best flavoured after the new year is in, and there is little doubt that the red kinds are the best keepers. With so many kinds to select from growers of small quantities do not know which is best, but they may get a fair idea from the notes on the different varieties by large growers. I know one large grower who only has two varieties. For market

it may not be important to study quality if size is obtained. He grows those for which there is the greatest demand. Some of the larger Celeries are not at all inferior to the smaller kinds in quality if well grown from the start.—L. W.

**Wintering garden roots.**—Where Beets, not the hardest of roots, are found to preserve their flavour and freshness best in the soil during the winter, and that is generally the case if the soil be fairly porous, it is good practice to lift each other row, and store the roots in dry sand or ashes on their sides in a cool shed, and then carefully earth up the remaining rows, drawing the leaves erect, and covering up the crowns fully 6 inches deep with soil. So covered, Beets will stand much hard weather admirably. There can be no doubt but that roots so kept show the highest flavour when cooked. Parsnips also seem to keep much the best in the soil if it be not too holding or retentive of moisture. They, too, may be earthed up in the same way, and Turnips in drills are much safer for such soil protection. Large Carrots may be best out of the ground, as they are so liable to split with moisture, but the late summer or July sowing does well left in the ground, needing a slight covering of litter or Fern when hard weather comes. Celeries can also be kept fresh and from harm by well earthing up. In some gardens it is found an excellent plan to lift all the roots from the open quarters and to lay them in thickly underneath overhanging trees, as these furnish much protection from frost. A good coating of dry leaves over the roots keeps them safe, and the roots are found to be very fresh and juicy. Too often roots are stored in cellars or places where the atmosphere is close and warm.—A. D.

#### BETROOT IN WINTER.

My experience with Beetroot coincides with that of "G. W." (page 452) as regards its hardness. Although it is convenient to store a few for immediate use under cover, the bulk is better left outdoors. My plan for several years past has been to lift the roots in autumn, laying them in shallow beds on a border near the path, from which they may be drawn as required for use. This is done by simply opening a small trench at one end with the spade, deep enough to lay in the roots, over which the soil removed for the next row is placed, leaving the foliage unbroken. With the roots wholly covered with soil they remain sound and firm for several months, and are thus quite free from the objectionable shrivelling which occurs when placed in dry root stores. Nothing could be more simple, economical, or satisfactory. In the event of severe weather, a covering of leaves, and over these just sufficient straw litter to prevent them being disturbed by the wind, is all that is necessary. By stacking them in an open shed in layers of roots and moist soil alternating, I have had firm roots in July the following year, but it is not everywhere that shed room is so convenient to hand. The advantages, however, of such accommodation are great when long spells of bad weather, particularly frost and snow, set in. Large roots, without doubt, are most unprofitable, and, apart from their inferior cooking qualities, they are a source of complaint from the cook, because of the inconvenience of their great size. Poor and firm soil and late sowing are the best provisions for giving all-round satisfaction, but too often early sowing is resorted to in small gardens. With the early Globe-shaped varieties now available there is not the same necessity for late-stored Beets, because it is such an easy matter to connect the two seasons in the matter of supply. For very late use they should be stored in a cool position under the shade of trees or a north wall. W. S.

Wills.

**Potato Syon House Prolific.**—This is likely to be one of the most useful varieties in existence, judging by results recently noted at Livermere. From a couple of dozen sets there seemed to be a remarkably large heap, and when the quality of

the new-comer is taken into consideration, its value is at once apparent. The tubers were very regular in size, of capital shape, with hardly any perceptible eye. The skin is slightly rough and the flesh white, while its flavour is also excellent. Anyone on the look-out for a good variety should certainly give this a trial.

**Jerusalem Artichokes.**—Judging by a sample I saw very recently grown by a gardener at Surliton, it seems evident that much may be done to improve the outline of the tubers of this vegetable if the most shapely be constantly selected. The samples shown me a few weeks since were smooth and good in form. The grower said that he had already selected for successional planting any tubers that showed the bad protuberance in less pronounced form, and in the tubers I saw this protuberance was scarcely in evidence. Possibly the white-skinned form owes its greater relative smoothness of outline to a rather less robust habit.—A. D.

**Cabbage Sutton's Earliest.**—This is a very useful variety either for spring or autumn use, as nice heads may be cut in about four months from the time of sowing. After a hard winter, when the plants are badly cut up and supplies are likely to be none too plentiful, this variety may be sown in boxes under glass, pricked out and planted on a warm, early border, when it soon turns in and helps materially with the autumn plants. If required to stand the winter, it must not be sown before September, and planted out when ready on firm ground. So treated it has proved very useful, and in seasons when Ellam's Early has run, this has been quite free from bolting.—R.

**Large Carrots.**—Other than for show, I fail to see the utility of having Carrots so large as often seen, and even for exhibition they should not have preference over medium roots with less core and of better quality. A new Carrot—or, at least, a little-known one—I have recently seen measured 2½ feet in length and from 10 inches to 15 inches round. These huge vegetables are not so great favourites as many imagine; in fact, of late years I am pleased to note there is more demand for quality. Most growers know that the best roots are those grown quickly. Tomatoes if extra large find less favour, and Brussels Sprouts also may be grown too coarse. To obtain large roots a much longer period of growth is needed, and when lifted, such roots do not keep so well as smaller ones.—M. E.

**White Jerusalem Artichoke.**—Having grown the white Artichoke for several years without any trace of disease, I was surprised to learn from Mr. Tallack's note (p. 403) that his tubers were attacked. Mr. Wythes, too, imparts information (p. 452) to me previously unknown, namely, that there are three distinct kinds. The stock I have is of medium size, much more even in outline than the old purple sort, clear in colour, and very prolific. A variety, however, that would produce roots 9 inches to 12 inches in length would seem to me to deserve to be better known, notwithstanding, as Mr. Wythes points out, the superior qualities of the smaller kind. Artichokes in many gardens are not given very good quarters or attention, because they are not highly appreciated by many consumers. This happens more frequently in small than in large gardens, and the information given by Mr. Tallack will certainly not be very pleasant reading to those having a good demand to meet throughout the winter and spring months. Was not the original English grown white-skinned Artichoke a sport from the coloured form? I was under the impression, perhaps from unreliable evidence, it was so.—W. S., Wills.

**Early Broccoli.**—Doubtless many growers lack abundance of Broccoli after the Autumn Protecting is over. This is a splendid autumn vegetable, and I have tried to get it in quantity from now till February, but so far have not succeeded, as when sown for late supplies, with a fine, warm autumn it turns in before Christmas. I have tried others, and several appear good

for the season named, but as only a small trial has been given, it is too early to write of their merits. We have Snow's Winter White, a good old variety recommended for mid-winter supplies, but it is not reliable, so far as the supply is concerned, as of late years I have cut this variety from December to March and it varies greatly in quality and shape. For many years Snow's Winter White was the best winter variety grown. If sown in April it usually turned in in December in warm gardens. In northern localities it was well to sow earlier than date named. I fear the true stock is almost lost, as of late it appears much altered, being coarser and later. A variety which came in very early last year called Improved White Sprouting was much liked. This was very free and produced small heads in abundance. Favourite is a very fine Broccoli for February and early March, but a dwarf form to give a supply in succession to the Self-Protecting would be a great boon to growers. I note dwarf, as I find these are the most reliable in our variable winters. I find there is most demand for good Broccoli at the season named, as the supplies of other good things are on the wane.—S. M.

SOCIETIES AND EXHIBITIONS.

NATIONAL DAHLIA SOCIETY.

THE annual meeting was held on Tuesday, December 14, 1897, at the Hotel Windsor, the president, Mr. T. W. Girdlestone, in the chair. The past year has been a very successful one for the society; there has been a considerable accession of members, the income has correspondingly increased, and a substantial balance remains in hand. It is worthy of remark that over 75 per cent. of the annual income is disbursed in prizes at the Dahlia show at the Crystal Palace. The extent of the exhibition of September last surpassed that of previous years. Increased exhibits of all types of Dahlias were staged, singles alone excepted. The quality was also better, and left little to be desired in the majority of the classes. The great national celebration of the year was represented by a special decorative class of large size to illustrate the great development of the Dahlia during the reign of Her Majesty. New classes had been added to the schedule for vase-decoration and for new members respectively. These were all successful, and will be continued next year. The large increase in the number of entries in some of the Cactus classes for amateurs is indicative of the extent to which the culture of this section is being taken up. Still more rapid advances may be anticipated in the future.

The committee deeply regret the loss by death of Dr. Hogg, a distinguished vice-president of the society. The Dean of Rochester and Sir E. Saunders become patrons of the society, whilst the Duchess of Sutherland, Countess of Pembroke, Viscountess Sherbrooke, and Lady Penzance have become patronesses. Mr. T. Pendered, president of the Wellingborough Dahlia Society, was elected a vice-president in the room of the late Dr. Hogg.

Classes have been provided in 1898 for twenty-four blooms of Cactus varieties, distinct, in the nurserymen's section, and for eighteen blooms, distinct, of shows or fancies, or intermixed, in the amateur section. An open class for a shower bouquet of Cactus Dahlias has also been added. Mr. F. W. Fellowes kindly offered a silver cup for the best Dahlia bloom in the show.

The list of Cactus Dahlias was revised for the coming year, and now stands as follows:—

- |                     |                  |
|---------------------|------------------|
| Alfred Vasey        | Cycle            |
| Annie Jones         | Daffodil         |
| Annie Turner        | Delicata         |
| Arachne             | Earl of Pembroke |
| Beatrice            | E. J. Deal       |
| Bertha Mawley       | Fantasy          |
| Britannia           | Fusilier         |
| Capstan             | Gloriosa         |
| Chas. Woodbridge    | Harmony          |
| Ciaderella          | Harry Stredwick  |
| Countess of Gosford | Iona             |

- Island Queen
- J. E. Frewer
- Juarez
- Keynes' White
- Lady Penzance
- Mary Hiller
- Mary Service
- Matchless
- May Pieter
- Miss A. Nightingale
- Mrs. A. Beck
- Mrs. A. Peart
- Mrs. Barnes

- Mrs. Gordon Sloane
- Mrs. H. Cannell
- Mrs. John Goddard
- Mrs. Leopold Seymour
- Mrs. Montefiore
- Mrs. Wilson Noble
- Night
- Regulus
- Robert Cannell
- Starfish
- Tillie
- Violet Morgan

**Royal Horticultural Society and Victoria medal.**—At a meeting of council held on December 14 it was decided to issue a diploma to all the recipients of the Victoria medal of honour. It was also unanimously resolved: "That in the event of any recipient violating the conditions on which the Victoria medal of honour was bestowed, by using it for advertising or for the promotion of trade interests in any other way, the name of such offender shall be struck off the list."

**National Chrysanthemum Society.**—The general committee of this society held a meeting on Monday last at Anderton's Hotel, Mr. T. W. Sanders in the chair, and there was a full attendance of members. The secretary announced that the floral committee meetings already fixed for November 28 and December 12, 1898, would not be held. Letters were read from Messrs. Addison and Moorman resigning their posts on the floral and general committees, the latter gentleman being requested to reconsider his decision. A discussion arose on the recommendation of the schedule sub-committee that a new class for twelve vases of specimen blooms of Japanese varieties, distinct, each vase to contain five blooms standing a foot above the top of the vase with no foliage on the stems, but foliage to be on separate stems be made, the prizes to be as follows: £20, £15, £10, and £5. It was also announced that the president, Sir Edwin Saunders, had offered to give a special prize of the value of £15. The Royal Aquarium Company also offered to supply the prizes in the class for twenty-four Japanese, distinct, amounting to the sum of £30 and being divided as follows: First prize, £8 and a gold medal; second prize, £6; third prize, £5; fourth prize, £4; and a fifth prize of £2. A list of other special prizes was also read out. After a somewhat lengthy discussion, the report of the schedule sub-committee as regards all the shows was adopted. The judges nominated for the various shows were then duly elected, with reserves in each case. New members were elected and the Dundee Chrysanthemum Society was admitted in affiliation.

**Magnolia Yulan fruiting.**—Not long ago I noticed on a large tree of Magnolia conspicua some red knobs about the size of a Cherry, with a tassel of about an inch long hanging out near the base. On being gathered they were found to contain a scarlet seed. The best one contained a seed which was plump and of good size. Can you tell me if it is a very unusual thing for the tree to fruit in England, and if the seeds are of any use?—FRANCES C. C. KENNARD, *Shopryke House, Chichester.*

\* \* It is unusual for this to fruit in England. We have asked several people who possess large specimens, and they tell us they have never seen any seed. We believe it fruits in France. Have any readers of THE GARDEN seen it fruiting in England?—ED.

**The weather in West Herts.**—On the 16th the reading in shade was 56°, which is the highest shade temperature recorded here in December for nine years. Since then, however, there has been a rapid fall in temperature, and on the 21st the mercury at no time rose above 37°. The nights were mostly warm for the time of year, the exposed thermometer never showing more than 7° of frost. At 2 feet deep the ground is still 2° warmer than is seasonable, but at 1 foot deep the

reading is now slightly below the average for this depth. Some rain fell on three days during the week, but the amounts measured proved very small. Throughout the last three days the wind has come almost exclusively from some easterly point of the compass. On the 15th nearly six hours of bright sunshine were recorded, but, on the other hand, the last four days have been altogether sunless.—E. M., *Berkhamsted.*

NOTES OF THE WEEK.

**Late Rosea.**—So late as the 16th of the present month, capital blooms of two well-known Roses were noted in a garden having no special facility for their culture. The kinds were Dupuy Jamain and Souvenir de la Malmaison, and in each instance they were represented by good flowers.

**Banksian Rose.**—I send you a spray of yellow Banksian Rose, one of several gathered in a garden near here on December 18. To make up the bouquet there were Neapolitan Violets and *Lonicera Standishi*, an unusual assortment from the open border so near Christmas.—T. H. ARCHER-HIND, *Coombeishacre, South Devon.*

**Primula Princess** is one of the finest of the double varieties of *P. sinensis*, and as such by no means easy of culture. At the same time, the large handsome blossoms are of considerable service during the winter, particularly in those gardens where a large or continuous supply of button-hole flowers is needed. In these respects the variety of colour found in the group is also of service.

**Pelargonium Niagara.**—Possibly among the white-flowered zonals this variety is unequalled either in the form, size or purity of its flowers. In all these respects the variety appears to be well-nigh perfection—so far, indeed, as the present-day florists have arranged such a standard of merit or excellence. Of precisely the opposite shade is a kind bearing the name Owen Thomas, a very fine crimson, with a small, yet conspicuous white eye.

**Brownea coccinea.**—Though possessing a somewhat straggling habit of growth, there is something exceptionally brilliant and striking in the compact trusses of brilliant orange-scarlet flowers as now seen on a large example in the Palm house at Kew. Flowering much earlier in the year would doubtless give a decided increase of its richly-coloured heads, when the tree would be indeed attractive.

**Aralia Sieboldi in North Wales.**—This plant has been greatly admired during the short days of November and December. It is growing here in company with Rhododendrons, and the dark glossy foliage shows the branching spikes of silvery flowers to great advantage. It has been planted over twenty-five years, and is now 9 feet through the centre and 7 feet high. It is growing in light stony soil fairly well exposed to the sun.—W. COATES, *Gorddino, N. Wales.*

**Plumbago rosea.**—At any season of the year this is a beautiful plant, more so at the present time when flowering subjects are rather scarce. There is also much to admire in a growth that is not in the least degree formal, and which is more than ever pleasing when freely studded with its charming rose-pink sprays. During winter the flowering is not so abundant, but its lovely colour renders it most attractive and welcome now, even though the sprays are but sparsely produced.

**Begonia Gloire de Sceaux.**—This is a most valuable kind for winter flowering alike in the handsome foliage as well as the pretty heads of blossoms. The plant would indeed be worth attention for its effective foliage alone. Like many others of its tribe, this kind is useful in small or large plants, forming in the latter really grand specimens. At the last meeting of the Royal Horticultural Society a nice lot of plants was staged, and mixed with useful Palms made a very pleasing group.

**Chrysanthemum Golden Dart.**—This pleasing late Japanese kind is largely grown at Syon by Mr. Wythes for its late flowering. Not only is it a naturally late kind, but it is also reliable

and opens its blossoms well even in bad weather. Some of the so-called late-flowering varieties are very liable to give blind shoots only, which is most disappointing after spending a season growing the plants. So really valuable has the above proved this year at Syon, that Mr. Wythes is increasing his stock for another year.

**Roman Hyacinths.**—Of the beauty and value of Roman Hyacinths we were reminded the other day by a really splendid group in one of the houses at Syon House, and, much as one admires them in the ordinary way, their value is enhanced when seen in bold effective masses. Good culture was evident in fine spikes and foliage also. Too frequently in the early batches the foliage is sacrificed to a considerable degree by undue forcing or the endeavour to rush them too quickly into bloom. Mr. Wythes evidently approves of giving a little more time and is amply repaid by the excellent results that ensue.

**Cypripedium insigne at Syon House.**—At the present time there is a splendid lot of the above in full bloom, fine plants in medium-sized pots. It is doubtful if in general usefulness this old kind in its best forms is surpassed by many of the more recent novelties. The length of time the flowers remain fresh either on or off the plants is remarkable, while its easy culture readily commends it to all. All the summer long the whole of this kind with some few others are relegated to pits and frames in the open, a course of treatment which has been adopted by Mr. Wythes for some years with excellent results. Now that the plants are flowering profusely they make a fine display in a long lean-to structure. Such well-known varieties of *C. insigne* as *Maulei* and *violaceum* are also in flower, the latter very distinct and finely marked. As seen here this well-known plant constitutes a most valuable midwinter Orchid, at once free flowering, reliable, and easy of cultivation.

**Iris stylosa alba.**—In more than one position at Kew just now this ever welcome winter kind is flowering profusely, many spikes already past and gone. There yet remains, however, quite a large number of spikes to keep up a succession of blossoms for some time. One item which strikes one is the variability both of foliage and flower in the Kew examples. In the typical species the foliage possesses considerable variety, while the flowers vary from pale to deep in their pleasing shades. The white kind above mentioned has quite broad leaves, while a form known

as *I. s. speciosa* has very narrow leaf blades and quite dwarf tufts. The examples now in flower are all of good size, and with their crowns closely packed against the wall appear quite content. The plants are equally happy, however, in any position, affording protection from very keen, biting winds that damage the points of the leaves and appear also to check the flowering. Doubtless the examples at Kew have received material assistance not merely from the wall, but also from the mild season.

## PUBLIC GARDENS.

**A park for Ventnor.**—The trustees of the estate of Mrs. Evans, the owner of Loftly Downrise, above Ventnor, one spot of which is the highest point of land in the Isle of Wight, have intimated that it is Mrs. Evans's intention to make the town a present of the Downs for the use and recreation of the public for ever. The Downs comprise several hundred acres, and the summit commands a wide range of view over the whole island and parts of Hampshire and Sussex.—*Times*.

**New open space in the East of London.** The Parks and Open Spaces Committee of the London County Council propose to acquire in Grace Street, Bromley, in the East of London, a plot of land, an acre and a half in extent, which shall be laid out as an open space for the enjoyment of the inhabitants of the locality. The purchase money is fixed at £6000; £1700 will be required for laying-out and boundary fencing, and the space will involve an annual charge of £250 for maintenance.

**Ham Common.**—Ham Common, Surrey, as to which there has been a good deal of litigation between the villagers and the Dysart Trustees, is about to be placed in the hands of a board of conservators, a memorial to that effect having been presented to the Board of Agriculture. In response to this appeal, the Board of Agriculture have, under the Metropolitan Commons Acts, 1866 and 1878, issued a draft scheme for the future management of the common. The scheme provides that the common shall be managed by a body of conservators, who shall have full power to preserve the common for the use of the public, to enclose portions of it for cricket

grounds, to prevent encroachments, to frame bye-laws, and to enforce penalties for infringement of them.

**Churchyard Bottom Wood.**—The Parks and Open Spaces Committee of the London County Council in a report which they have just issued state that at the latter part of the year 1895 they had before them an application from the Hornsey Urban District Council for a contribution of £5000 towards the purchase-money required for the acquisition of Churchyard Bottom Wood. At that time the Council could not legally make the contribution. Since then authority had been given by Parliament by the Highgate Woods Preservation Act, 1897, for the Council to assist in securing this land as a place of public recreation. They had been urged by the Commons Preservation Society, the Kyrle Society, the Metropolitan Public Gardens Association, and many residents in the district to recommend the Council to make a contribution of money towards acquiring the land, and, after mature consideration, they were of opinion that the Council should assist in the preservation of this desirable open space. It was true that the wood was outside the county of London, but it was so near as to be readily accessible to the inhabitants of the northern districts. And it was right that they should draw attention to the fact that, owing to the rapidity with which the area of the county was being covered with houses, it was already practically impossible to provide any more large open spaces in the central, northern, or eastern districts, except by the purchase of property at enormous cost; and it therefore seemed to them advisable that the Council should join with the other public bodies in preserving this wood for the public benefit. The committee recommend a contribution by the Council of £2500.

**A query about Moss Roses.**—I notice as many as over forty Moss Roses in one list alone. Will any of your readers kindly tell me how it is we never, or rarely, see Moss Roses in good condition in the ordinary garden; also if there are any among the many Moss Roses that are really worth growing, and if they are best on their own roots?—R. U. S.

**Name of fruit.**—*Warnley*.—Apple *Reinette du Canada*.

